THE CULTIVATOR.

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Rural Conveniences and Animal Comforts.

VERY few persons fully realize the beau ideal of comfort in the country, although it is by no means very difficult of attainment. Luxuries of the first class, may be supplied by the fruit and kitchen garden, the orchard, and through a well-kept stock of domestic animals. We do not allude to the common, slip-shod and imperfect way in which these supplies are obtained; that is, by means of late and stunted vegetables in a weedy and unmanured garden, or fruit of a doubtful character, on neglected, moss-grown, unpruned trees, and every thing else of a similar style of production. These cannot be called luxuries, and even the inhabitant of dense cities, who sees only brick walls, and one small patch of clear sky just overhead, may get much better at the nearest market, on the corner of the next street. What we allude to, are articles of much higher perfection—the best early vegetables from the hot bed; the most delicious raised in the open garden: fruits of the most improved varieties, under the best cultivation, and comprising the whole yearly circle, from the earliest strawberries and cherries, through the profusion of sorts that ripen in summer and autumn, to the finest long-keeping apples and pears. Every one, almost, has plenty of fruit during a certain brief period in autumn, and some have a partial or occasional supply through a large portion of the year; but very few are able to place a fine dish of the best upon their tables for every day of the year. The animals of the farm contribute their share; "the flowing cup, fresh from the dairy virgin's liberal hand," as Armstrong expresses it; real genuine cream for the strawberries, and not the market mixture of chalk and milk; a fowl for the table, when needed, and plenty of fresh eggs from the poultry house at all times; these all contribute much to the comfort of country life. But these are not all; the neat residence, the well kept ornamental grounds, the well furnished rooms, the intellectual food of books and papers, all have a large share in making up the complete whole.

But while the country resident is providing for his own convenience, he should not forget the comfort of his domestic animals. It is always gratifying to see the same complete system of convenience in a farmery, as in the most perfect and best kept family residence. Warm, well ventilated, well littered stables, thoroughly cleaned at least twice, but better three times a day, are not so rare as ample provision for the smaller animals. All animals are most liable to disease, and most subject to a loss of flesh, when suffering from any kind of discomfort, among the most prominent of which are badly cleaned floors and an impure atmosphere. Good milk is not to be expected, nor good butter to be made from cows suffering under these unfavorable influences. A very rare thing is a clean, inoffensive piggery. Every pig-house should have a smooth, hard floor, so as to be constantly scraped and swept, by the easiest possible removal of the accumulations. Where several inches of peat or turf are deposited, for them to root and burrow in, (when the weather is not freezing.) this should never be allowed to remain long enough to create an unpleasant odor, and a hard floor will contribute much towards its easy removal. How much better would be such special provision as this, than the more common practice of allowing swine to roam the barn-yard among cattle, seeking shelter and cleanliness, but finding none. Fowls are very sensitive to cold and discomfort. We have examined many well made poultry-houses, but scarcely one kept constantly sweet and clean. It costs but little more to remove a peck of hen-guano, in light semi-daily instalments, than at one weekly and disagreeable operation. Sheep would grow and thrive, and survive our winters enough better to pay for artificial shelter in a year or two, if comfortable sheds and dry yards were provided for them, and sufficient divisions made for keeping the various classes of weak and strong, young and old, separate.

Complete ranges of buildings to furnish ample provision for all these purposes, should be regarded as a sine qua non of every good farm; and if the tools and implements, also, could be only regarded as having some degree of sensation, perhaps better care would be taken, and better shelter be provided for them. Carts, wagons, and plows; rakes, hoes, and forks; harrows, cultivators, and drills, should as much have special rooms provided for them, in which they should be carefully kept when not in use, as the favorite horse.

There is one other room of a different character, which should never be omitted on any farm of considerable size, but of which nearly every one is entirely destitute. This is a *business office*, attached to the

dwelling, where the account books are kept, where hired men are settled with and paid, where bargains are made with business men, and all consultations of a business character are held. Such a room need not be more than ten or twelve feet square, and may be of very simple construction, warmed by a small stove, and not consuming a cord of wood in a year. If the farmer does not himself see the advantages of such an office, every neat house-wife most certainly will, who is so often annoyed by such transactions in those singularly appropriate places, the parlor, or around the kitchen cook-stove.

We might add to the list of country conveniences, good, well gravelled farm-roads; well paved or flagged barn-yards; and self-shutting and self-fastening gates for the different fields.

Want of Accurate Experiments in Cattle.

At the late fair of the New-Hampshire Agricultural Society, Gen. GLIDDEN remarked that he had gone into *Devon* stock, and had lost by it in the weight of his cattle. The *color* was excellent, and that had introduced the stock throughout the State; it could have been nothing else, for this breed was deficient in fattening, working, and milking qualities. Other people might favor them, but when he found a Durham, or a native calf, weighing 20 lbs. per quarter, while the Devon weighed but 15 lbs. per quarter, he should be in favor of the larger breed.

This mode of judging of the value of breeds is very common, and often very erroneous. A thousand dollars in small bills is worth the same sum in large ones; a thousand bushels of corn converted into a thousand dollars' worth of beef in small animals, is worth more than if converted into five hundred in large animals. Large ones, it is true, are the most imposing in appearance; but the question is, what have they cost in raising? This is a question which is rarely asked and never answered, in all the controversies about the relative merits of Durhams and Devons, Merinos and South Downs, Berkshires and Landpikes, Suffolks and Alligators, Shanghais and Bantams, Dorkings and Polands, but which would quickly settle many disputed points. An extraordinary cow will make sixteen pounds of butter per week; but what is the relative cost of this butter, as compared with the product of the eight-pound cow? Is poultry in a ten-pound carcass, cheaper or dearer than poultry in five-pound animals? Are the Brahma-pootras or the Dorkings raised at least cost? The time expended in controversies of this character, would have long ago settled the question if employed in well-conducted experiments. A peculiarity of the philosophy of the ancients was their exclusive adherence to speculative reasoning—they preferred disputing for ages, to observing or experimenting for an hour; this absurdity was long since exploded by Lord Bacon, but has been lately revived by stock-breeders; and we should be glad to see at least half a dozen of the most enlightened State agricultural societies, turn over a new leaf, and sustain the philosophy of Bacon by instituting experiments on the subject.

Government Aid to Agriculture.

F. P. BLAIR stated, in his late Address before the Agricultural Association of Montgomery county, Maryland, that Congress pays annually the sum of about *one hundred thousand dollars* for the publication of the Agricultural Report from the Patent Office. This report is of importance, mainly, to the congressional printer, its contents being comparatively of little value to the public, while the sum paid for it is more than enough to endow and support an AGRICULTURAL COLLEGE and an EXPERIMENTAL FARM.

Must this money continue to be very nearly wasted, or shall an effort be made to secure its appropriation for a wiser and more practical purpose?

Suppose, for instance, that Congress should issue $300,000 in five per cent. stock, $200,000 of it to be appropriated to the purchase of Mount Vernon, and the other $100,000 to the erection of the buildings, &c., necessary to prepare it for an Agricultural Institution. This would absorb for interest on the stock, but $15,000 a year, leaving a balance of $85,000 for the annual support of the establishment. This would make an institution certainly as creditable to the country, and infinitely more useful, than the military academy at West Point.

Have the United States Agricultural Society, the several State Agricultural Associations, and the whole farming population of the country, sufficient influence to procure from Congress a change of this $100,000 appropriation for this desirable object? We believe it can be accomplished; and we should be glad to see the United States Agricultural Society, or the State Agricultural Society of New-York, take the initiatory steps toward its accomplishment. In what better work can they engage?

Importance of Method.

No greater element of success can be introduced into the habits of the agriculturist, than a strict, methodical manner of conducting the business of the farm, and no deficiency will more largely detract from his prospect of success, than a lack of method. The contrast between the man of method and the man without, is vivid in the extreme. The business affairs of the one are in all manner of forms and conditions, save in a prosperous form, while those of the other are, in sailor parlance, 'snug, trim and all ataut.' The contrast in prosperity and general enjoyment of life is fully as great as in the externals of business affairs.

The *successful* management of a farm requires a vast amount of care and attention, a close oversight; in short, an incessant watchfulness. There must be brought to the task no insignificant quantity of the most multifarious talents, and they must be steadily and sturdily exercised. The details of farm management are of the most extended and complicated character, and can be fully and successfully compassed, but by the active exertion of a disciplined and educated mind, which must call out its full resources, not forgetting the systematic arrangement, and prompt execution of all requirements for labor and skill.

That is a trite old maxim which sayeth, "A place for every thing and every thing in its place." Were it added, that the *place* be under a shelter, the addition would be an emendation. The farmer who lacks method has many places for every thing, and far too frequently places of full exposure to the vicissitudes of the weather. The loss consequent upon such exposure is no small item in the year's account, and the loss of *time*, though too little heeded, will often engulf the year's profits.

The orderly arrangement and systematic conduct of all matters pertaining to the farm establishment is not only indispensable to the profitable management of the same, but is also a sine-qua-non, with regard to the pleasure which is to be derived from rural life.

Orderly arrangement leads to *neat* arrangement, and therefrom springs the sure beginnings of refinement and rural taste, which is a way-mark in the direct road to intellectual culture, honor, usefulness, true gentility, and a happy life. J. G. K. *Dryden, N. Y.*

"The Country Gentleman."

L. Tucker, Esq.—There is a debt of gratitude due every man whose mind grasps the wants of his fellow men, and especially is such the case where that man has the soul and energy necessary to the supplying of that want. In the establishment of the "Country Gentleman" a present public necessity was met, and we who have witnessed its success, and the vastness of its design, are not disposed to withhold the meed of praise due the projector of such an enterprise.

The wants of man are not numerous. An All-wise Creator has supplied our necessities with a boundless lavishness, and nothing is left for us to do but appropriate His bounties; but to do this effectually, mind wants aid, thought must be expanded—such thought as tends to enlarge our views and invigorate the dormant faculties. Farmers, who are the pride of our country, understand the force of such helps, especially those of them who have been constant readers of your paper. They are more than ever acquainted with the personification of a true gentleman, and are beginning to associate him with the soil. An intelligent, industrious cultivator, above all others, has approximated to the dignity of a gentleman.

Proofs of the immense good that has been accomplished through the dissemination of agricultural science can be easily arrived at, by going back with memory to the first issue of the "Albany Cultivator" Who will attempt a calculation of the amount of improvement made since then in the agricultural pursuits of our own state? Who has the ability to compute the exact amount of manly, intelligent progress made among farmers? We behold the fruits of such efforts as are being put forth through the columns of the "Country Gentleman" and "Cultivator," and in our hearts are thankful for their boundless supply of our mental wants.

It only remains for me to add, by the perusal of your paper, I have been led to appreciate its merits, and esteem it a pleasure and a duty to recommend it as worthy the patronage of every man who wishes to be well informed, be he farmer or tradesman. A.

Culture of the Cranberry.

Warwick, N. Y., Nov. 9, 1853.

Messrs. Editors—Can you, or any of your correspondents, inform me as to the best mode of raising the cranberry for market. I have a piece of bog meadow (muck or black dirt) which is too wet for the cultivation of grain, and which cannot easily be drained; and thinking the cranberry could be raised to advantage on such soil, I ask for information from you or your correspondents, and will be greatly obliged if you could inform me where to procure the plants. With respect, yours, &c., B. F. H.

We are gratified in being able to give, in answer to the above inquiry, the following valuable paper on the culture of the cranberry, which we find in a late number of the *Boston Cultivator*. Plants can be procured of F. Trowbridge, New-Haven, Conn.

John E. Howard, Esq., supervisor for the Plymouth county (Mass.) Agricultural Society, in his late able report, states that the committee appointed to consider the subject of the culture of cranberries, recommended that the first prize of $10, be awarded to Thomas H. Sampson, of Pembroke.

His mode of culture is given as follows:—Having succeeded with great labor, in clearing the brush and larger wood from two pieces of low, moist swamp land, a deep vegetable soil; and having pared and removed the turf and tussoc stools from their surface, he proceeded to set his plants. This was done in different years, commencing in the spring of 1846, and ending in the fall of 1852. It consisted in placing small square sods containing them, cut from a bog meadow, in holes dug for their reception, at short distances apart; and then drawing the soil around in such manner as to secure the sods with their contents in their new position. This labor seems to have been performed without any view to subjecting the plants to any subsequent course of culture, which they appear not to have received.

Of these two pieces of land, one exhibits the plants, more especially, in different stages of their growth; some having been recently set out, looking puny and feeble, and showing scarcely any runners; others of older date, looking stronger, with runners more numerously thrown out and extended. But of the larger part of those, and of all the other plot, the vines cover the earth as with a mass of net work, although they do not constitute the exclusive growth, appearing in a most healthy and highly vigorous state, and bearing—a spectacle gratifying, it may be supposed, to the proprietor to behold—a most luxuriant crop of sound, bright, sparkling fruit.

One square rod of these vines, it is stated, produced six and a quarter pecks, being at the rate of two hundred and fifty bushels to the acre.

The supervisor recommends the following mode of cultivating this valuable fruit:

Select for the purpose a deep vegetable soil, pare and remove the turf from its surface, dress, if practicable, with fine sand, (not soil) or some better material; set the plants, giving them fair working distance, and then for the space of two or three years use all diligence to help them to hold and occupy, not, in any sense, as commoners or co-partners with other products, but as sole tenants, which they will not be backward in seeking to become. I will only add, that if the waters of any small stream near at hand can be so controlled as to throw a thin sheet over the surface, during winter, and, occasionally, perhaps, for a brief while, at other times, to refresh and invigorate its occupants, and prevent injury from frosts, which sometimes happens, it would be a desideratum connected with the object in view, of much importance.

Letters on British Agriculture—VIII.

IMPROVED BREEDS OF CATTLE.

LONDON, Oct. 31, 1853.

L. TUCKER, ESQ.—It is no secret that domestic animals, *well born* and judiciously managed, are profitable, while those of low origin and meanly provided for, seldom repay the expense bestowed upon them. To rear pigs that will give more pork than bristles; sheep that will afford fine wool and fine meat; and horses that gratify a just admiration of strength, elegance and graceful movement, is certainly wiser than an opposite course. So with regard to horned cattle; there can be no doubt that those of good parentage and well reared will give an earlier and a better return. Wisdom, in this matter, if not in all others, is better paid than folly.

British agriculturists have long understood this, have reared their best calves for the sake of the future herd, instead of consigning them to the shambles because they would bring a little more ready money; have brought those animals together, which, according to the ascertained laws of propagation, would be likely to produce the best progeny; and have already received their reward, not merely in the possession of here and there a fine animal to admire and to sell for a great price, but in the general improvement of farm stock. I have spent much of this day in the Smithfield market, and I hardly know which most to admire, those splendid animals seen at the agricultural gatherings, or the thousands upon thousands of good, well fattened cattle, exhibited in the market. Unquestionably, *the raising and propagation of fine cattle is among the prominent means by which the present advanced state of British agriculture has been reached.* It is less than a century, hardly more than half that time, since the business of breeding for improved races has been intelligently entered upon, and yet I am told, and I suppose it to be true, that the average weight of the cattle now sold in the Smithfield market is more than double of those brought to the same place a hundred years ago. They are now better cared for; the cost per year of keeping is undoubtedly greater than formerly; but it should be considered that the time of growing them has been diminished; and it is therefore doubtful whether the whole expense of rearing and fattening them is much increased.

Were you to ask my opinion of the different breeds, I might be in difficulty. Not being remarkable for moral courage, at least, not wishing to invite antagonism, and being unwilling to throw a single obstacle in the way of any of my countrymen, who have invested money in the importation of fine breeds, I might fear to give an opinion. It could be of little use.

One thing, however, is certain. I say it with profound respect for English good judgment—Americans must judge for themselves. Their objects in keeping cattle are different, in one respect, at least, from those of the English; there, the working properties of oxen are an important consideration. English farmers hardly take that into account; because, they mistakenly, as I think, though they must be supposed to know their own business, reject the labor of the ox. They appear also to think less of the milking properties than we do.—Wi ththem, it seems to be beef, *beef*, BEEF—beef first, beef middle, beef last. The breed that will produce the greatest body, lay on fat most easily, and come earliest to maturity is hard to be competed with in their latitude, whatever may be the milking or working qualities; and it will be perceived that there are reasons for this here, which do not exist in America. The price of beef is higher here, as compared with those of butter and cheese, than in our country. One reason of this is, in the tastes of the people, or perhaps I might better say, in their opinions. They do not believe it healthy to flood their food with butter; nor, if eaten cold, to lay it in in junks. I doubt whether the thirty millions of people here consume more than half as much butter as the twenty-five millions there. Fat meat is more to their taste. Give an Englishman fat beef, bacon and ham, and he will toast the Queen and say Old England for ever. An American demands more bread, more cakes, more pastry, and a great deal more butter and cheese. There is another reason why meats are retailing higher here; butter, cheese and eggs can readily be, and are to a great extent, imported, while the speed of steam is not quite equal to the importation of fresh meats.

Climate, also, has much to do with this question.—The best breed for England might not be the best breed for America, were all other things equal. There are not wanting here men, who insist upon cattle already acclimated to their own region, while they admit that other breeds are decidedly better for other counties; and yet the difference of climate between the but-end of England and the tip end of Scotland is almost nothing compared with that between this whole country and ours. The former is never hot, never cold, always humid; the latter is now scorching, then stinging, often changing from one to the other, but generally dry and stimulant. The difference is not that we have less rain—we have more. But with us, when it rains, it rains, and *gets done* some time or other, and the air becomes dry and exhilirating, so pure that you can see objects distinctly fifty miles, whereas here you can seldom see them five. These peculiarities essentially affect all animal life, from man down to the insect that troubles his tillage. I am now going to express two opinions, and I do it with the utmost positiveness, *knowing* as well as I *can* know any thing, that I am right, though Americans will dispute me outright on the one, and Englishmen will laugh at my taste on the other. The first is, that we, in America, can *never* rear nor propagate cattle, with all that watery, bloated, but to the eye most admirable size and plumpness, that absolute perfection of form, seen here. That we have fine cattle, I know. That we can have better, I have no doubt. My best wishes are with the importers of any and every fine breed. I believe that good will come of it to the country; and may the men who are doing well for their country, do well for themselves; such is my earnest desire for them; and if others, instead of giving

over their best native calves to the butcher, will breed from them, I believe that between the two classes of effort we shall not fail of obtaining the best stock for our climate, that both classes of breeders will deserve well for their country; and if not recklessly imprudent, will find a reasonable compensation. The other opinion is, that Englishmen, with their feed, fine as are their cattle in the fat, *beautiful*, plump, *perfect*, absolutely faultless form, can never make as good beef as we on Indian corn. Their joints on the table, done up every where in exquisite good taste, look as well as ours, and I think better. But then the *flavor*—it is wanting. If you want *to see* good beef, come to London; if you want to *eat* better, go to Boston, Albany, New-York—any where on that side. I hope I am not specially an epicure, but as often as I think of the Connecticut valley stall-fed oxen, the cows of no great pretensions on our hills, or the two and three year olds even, that roam in our dry pastures, I long for home.

The mutton of this country is as much more delicately flavored than ours, as the beef is inferior. I know not what the reason is, but the fact is unquestionable, and I do not wonder that the English people love mutton, and consume immense quantities of it.

While I have been writing the foregoing, in a room too public for consecutive thought, a gentleman from Wilts has said to me, that he has a farm in that county on which is a pasture of 260 acres, and of excellent quality, which has been managed nearly uniformly for more than half a century, the last 25 years by himself. He keeps on that pasture 60 large and nearly thoroughbred milch cows, of the Durham breed; 10 two years old heifers, 12 yearling heifers, and 10 cows that have become 7 or 8 years old, and are to be turned off each year as beef, making 92 in all. The calves are kept the first year in another lot, and are disposed of variously, except that 12 are selected each spring for the dairy, and are put with the cows in the great pasture. Thus the number of cows actually in milk is kept at 60, 12 yearlings being added as often as 10 cows are taken out, to guard against loss by disease or accident. He tells me that the annual produce of the pasture is 22,400 lbs. of cheese, 4,000 lbs. butter, 14,000 lbs. of beef, and refuse valued in pigs, about £80, besides from 40 to 50 calves, over and above the 12 necessary to keep the number of the herd good. He says that if he kept cows for milk only, he would have Alderneys by all means; that they give more butter and cheese in proportion to their keep, but as he turns off 10 a year for beef, the Durhams give him 1400 lbs. each, whereas the bodies of the Alderneys are little better than those of goats. He says farther, that his brother, who farms in a similar way, had, sixteen years ago, only Herefords, but that he has now exchanged them for nearly full blood Durhams, and is much pleased with the change. He also says that these large Durhams give very little milk in proportion to their keep; but it is remarkably rich, almost cream, and he is convinced that for him, at least, they are more profitable than any others. Whether his testimony is correct, is more than I can say. His appearance is that of a man of intelligence and candor, of one who knows what he is about. I should think that the general opinion here is inclining favorably to the Durhams, for the central and southern counties of England. What are best for America, must be an American question, and it must, as I have before stated, be settled with reference to points, which are not here taken into the account.

Possibly, a brief account of a visit recently made by me to one of the best herds in England, might not weary your readers. Through the kindness of B. P. Johnson, Esq., secretary of your state society, I was furnished with an introduction to H. Strafford, Esq. Through my own fault, not his, I did not see him till last week. Among other acts of kindness, which I shall ever remember, Mr. Strafford brought me acquainted with Mr. J. S. Tanqueray, of Hendon, Middlesex, seven miles from London, the owner of the herd just alluded to, as among the best in this country. I saw Mr. T. at his place of business, in this city, where he kindly invited me to take a seat in his carriage, and visit his place out of town. In company with Mr. Strafford and Mr. Toxford, principal editor, and I believe, proprietor of the Mark-Lane Express; Mr. Tanqueray accompanied us, and a most pleasant and agreeable trip I assure you it was. Mr. Tanqueray is the farmer of three or four hundred acres; has a beautiful country residence; possesses, I believe, a large property, made by his own energy, and certainly has a heart to enjoy it. His herd is of the short-horns vs. Durhams, containing upwards of one hundred animals. Among the first lot shown us, were the recent purchases from the celebrated Tortworth sale. of the late Earl Ducie's stock, of which accounts have been published by yourself and others. In this lot was the far-famed cow, Duchess 55, bred by the late Mr. Bates, of Kirkleavington, three of whose calves have lately been sold for the astonishing sum of 2,300 guineas; Grand Duke, to Mr. Thorne, of New-York, for 1,000 guineas; Duchess 64, to the same gentleman, for 600 guineas; also, the daughter of this cow, Duchess 66, to Col. Morris, President of the New-York state society, and Mr. Becar, of New-York. This beautiful heifer is now at Hendon, under the care of Mr. Tanqueray. These gentlemen also joined Mr. Tanqueray in the purchase of a bull at the sale of Earl Ducie's stock, called the Duke of Gloucester, for 650 guineas; and rather than lose him, they were prepared to give higher for him than ever was given for an animal of this character. He is the son of the bull mentioned above, and promises to fully sustain the character of the herd, tracing his genealogy direct from the Colling's stock, through Mr. Bates's and Earl Ducie's breeding. It will be observed that at the Tortworth sale, three of his calves sold each for 300 guineas or more, one of them a calf, at the time, of only a few weeks old, realizing 310 guineas. This last was from the heifer of Messrs. Morris and Becar, which, at the time of the sale, was under three years old, so that the heifer, at this early age, and her calf, but a few weeks old, brought upwards of 1,000 guineas. Mr. Tanqueray also purchased Duchess 69, from the same cow as the

Duke of Gloucester, calved in March last, for which he paid 400 guineas. This is a splendid specimen of the Durham. We may form some idea of the spirit and enterprise of this gentleman, from the fact that his purchases at the Tortworth sale alone exceeded 2,000 guineas. From his herd have been exported of late into the United States, several fine specimens. These have gone to Col. MORRIS, Mr. BECAR and Mr. THORNE, of New-York; Mr. ALEXANDER and other gentlemen in Kentucky and Ohio; Messrs. KELLY and REMMINGTON, of Philadelphia; and to Mr. LEVI A. DOWLY, of Boston. Besides these of the Duchess family of shorthorns, there were several other fine animals of the Oxford tribe, Lady Barrington and others, combining more or less the breed of the late Mr. Bates, Mr. Tanqueray having the last few years used no less than five bulls from that celebrated stock, and among them Balco, now owned by Messrs. Morris and Becar, lately on the show ground at Saratoga, though not entered for competition. This bull left some very promising stock at Hendon; and by the Fifth Duke of York (also a Kirkleavington bull), are to be seen some of the finest calves, such as any breeder might wish to possess. For some of these Mr. T. has bee offered tempting prices. He likewise possesses several animals of another favorite sort of cattle, descended from the Nell Gwinne, or Princes tribe, and with such materials, or combinations of the most celebrated blood, it may be supposed that he will take a high position as a breeder of neat cattle The stock appeared in good breeding condition, but not liable, as has been seen in some quarters, to the charge of excessive obesity. I may speak in another place of Mr. Tanqueray's general farming, as worthy of imitation, and explain wherein he excels. At present, I have only space to say, that in the neat and picturesque appearance he has given to his lands, and in the arrangements, perfect neatness and beautiful *economy* of his farm buildings, he deserves high praise. His animals, down to the pigs, of which there were many, breath sweet air; and the veritable ladies whose titles his animals bear, might visit these premises without boots, and without carrying off any thing to remind them where they had been. although the nature of the soil and the position of the stalls and yards are such that in the hands of some farmers, they would be intolerably filthy. From these buildings nothing of a fertilizing nature is lost, which is more than can be said of many barns that have fallen under my observation.

I will add, that although the improvement of neat cattle may have reached its maximum, so far as respects select animals, and although its diffusion has been going on till it has doubled the average weight of animals in the English markets, and shortened the time of rearing them, yet this diffusion is now advancing more rapidly than ever. Respectfully yours, J. A. NASH.

AGRICULTURE.—Agriculture is the primeval, and the most noble employment of mankind. Without a knowledge of the principles of the science of this art, man would become an uncivilised barbarian, subsisting like the brute creation on a scanty supply of fruits and roots.

Varieties and Culture of the Basket Willow.

"The willow manufacture, in the city of New-York, is already immense, and destined constantly to increase. The amount of imported willow ware is annually more than three millions of dollars! while the quantity of unmanufactured willow imported amounts to a much larger sum. And this amount of imported ware must also increase largely, unless the manufacture of the ware, and the cultivation of the willow, should be prosecuted extensively in the United States, in pursuit of that national independence which is desirable in peace, and indispensable in war.

The late JOHN REED, of Staten Island, amassed a little fortune by cultivating less than three acres of apparently worthless swamp, in rearing the Osier willow. Others have failed in the attempt, through ignorance of the proper species for this region of the earth, and the proper mode of cultivation. Some persons have settled down in the conviction that, perhaps Englishmen, Germans and Frenchmen may succeed in this branch of agriculture, but that a Yankee must necessarily fail.

Dr. C. W. GRANT, of Newburgh, about five years ago, came to the conclusion that, among his varied objects of enterprise, he would include the cultivation of the willow, for which purpose he purchased a marsh in the Hudson, not far below West Point, connected with an extensive upland farm, which marshy ground he supposed would make a good Osier field. On trial, it was found that only a small portion of the ground was adapted for that purpose. Partial failure served only to stimulate him to fresh exertions, and the loss of some capital was followed by the resolve to recover it. He therefore engaged in extensive investigation of the whole subject, and availed himself of all attainable knowledge respecting the culture of the Osier in England, Scotland, Continental Europe and America. Nearly one hundred kinds of willow were imported, and experiments were carefully instituted on different soils, with very satisfactory results. Willow of his production was tested last fall, by different basket manufacturers, and found equal in quality to the very best European Osier, and far superior to the largest portion of that which is imported. In the course of Dr. GRANT's investigations, a new species was found in the county of Suffolk, England, which proves to be a great acquisition not only in the arts, but as an ornamental tree.

To those who have undertaken, or are about to undertake, the cultivation of willow, it will undoubtedly prove very largely remunerative, if conducted with the requisite care and knowledge. Nature never yields choice favors to ignorance or negligence. No crop will better pay for proper tillage and proper soil—even yielding a profitable return *the first year*. But in the hands of unskillfulness and neglect it will of course prove an entire failure. In Rockland county, a small field of it was planted in the spring, and in the autumn of the same year yielded shoots of the finest quality, averaging at least six feet in length, and some of the tallest more than ten feet. The gross worth of the crop

could not be less than $150 per acre. Here nothing remarkable was done, but (with a slight exception) every thing was well done. The soil was pretty rich, clayey alluvial, and deeply worked, the subsoil plow running to the depth of eighteen or twenty inches (two feet would have been better). A very little stable manure and a few bushels of ashes were used as a top dressing. The manure should have been worked in with very light furrow, or with the cultivator, but a heavy rain made it impracticable at the most advantageous season, and in a great measure compensated for the neglect. A small portion of it retained standing water until the middle of June. Some of the cuttings did not, in this wet place, strike at all, and others made little growth. A blind drain was then made through it, when the plants began immediately to thrive, and made a pretty good growth, but not equaling the others by about one-half. The cuttings were of very vigorous one year old wood, a few of them retaining some of the former year's wood. Unless the cuttings have to the heart a high degree of vital energy, the life of the center fails, and the plant becomes rotten at the heart, and although it does not soon die, it gives but imperfect shoots; whereas the one that is full of vital energy makes a plant in every respect as good as a seedling.

How shall a person proceed that wishes to plant willow? A little dabbling in it will afford small pleasure and no profit. Take the business at the point at which the best cultivators now have it—acquaint yourself with their doings and opinions concerning it. The time, money and thought required to experiment, are not trifling; and even if you are willing to lavish the time and means, unless you possess the patience and skill of a thoroughly trained cultivator, the experiment will be conducted to no satisfactory result.

Willow growing is destined to become a business of importance, or rather, is now becoming so; and those who early engage in it judiciously, will receive the brightest reward. I have just learned that Dr. GRANT is so well pleased with it, that he is preparing to plant another field of twenty acres next season. That would generally be thought too much for a new beginner, and in most cases rightly so; but one-tenth of that quantity would be little enough for a beginning, and would be too little, unless you have, of suitable land (or mean to have) enough to extend it considerably. Those who make a large business of it will get the best per centage. I am making my article so long, that I cannot explain now, but will hereafter, if you wish.

A few words on the soil suitable for willow. It cannot be profitably grown in a *swamp;* but a swamp thoroughly drained and cultivated, is no longer a swamp. On such, willow will grow most luxuriantly; and so will red clover, but the upheaval of winter frost will throw out the clover and kill it, but will not injure the willow. It must, for its roots, have at least a foot of soil, that is not constantly sodden with water—and far better if you get two feet. Then the vigor will be astonishing to those who have not seen it; and to get shoots averaging 8 feet is easily practicable, *and is quite profitable.* I will relate a case that came under my own observation A field that had been cultivated the previous year (on a portion of it, although the season was very dry, the crop had been lost by too much wetness,) was plowed, trench-plowed and subsoiled; that is, one plow followed another in the same furrow, besides the subsoil plow, making three. It was commenced early, and found to be very muddy work, and half of it left until after corn-planting, bringing it to the last of May, and some of it was not planted until the early part of June. The cuttings had been provided in the winter, and deeply covered with litter in a cool place, but before the last of planting some of them had thrown out shoots of considerable length. Drouth of unexampled severity followed (1852). Apprehension was entertained of entire failure, yet where the ground was deeply worked, no failure occurred; but a little not deeply worked was an entire failure. The deep working so obviated the wetness that the past wet season caused but little injury. The early planted are still somewhat the best, but on any part the crop is quite satisfactory.

Dr. GRANT has prepared a treatise respecting its management and preparation for market, for the benefit of others, which he will publish as soon as he finds himself fortified by experiments, sufficiently protracted and extensive to enable him to speak with full certainty on all important points. He is able to supply cuttings, but only in limited quantities of the rarer kinds. He is willing to impart information to all interested parties." STATEN ISLANDER. *Richmond Co., N. Y.*

Brush and Tile Draining.

I read with interest an article from your paper, on the subject of under-draining, wherein you recommend the use of brush under certain circumstances. I am preparing to drain some wet prairie, which is of a loose muck in most places, and several feet in depth. As being the most durable, I would prefer to use tile, but the article is not made here, and could not be procured nearer than Buffalo, and I presume it would not pay to bring them from there. I have, however, an abundance of brush, and timber in all its forms. How large should the brush be? It has occurred to me that I could make a good drain with poles. What is the weight per thousand of 2 inch. draining tiles? By answering these inquiries, as it may suit your convenience, you will confer a favor on—A. A. COLE, *Peru, Ind., Nov.*12, 1853.

For soft or mucky ground, and where the drains are deep, it would be best to deposit first, a small layer of fine brush on the bottom of the ditch, then lay in the middle the poles or larger branches, and lastly, a layer of brush cut from three to five feet long, the buts downwards and down the hill. By this means, the poles are completely encased in fine brush, and their larger interstices prevented from becoming filled and choked by the soft material in which the ditch is dug. Where considerable water is expected to flow off; and more especially where the descent is trifling, it is quite necessary that some large channels of this sort be provided. Where, however, the water is in small quantity, it may be sufficient to fill with brush in the ordinary way, or by placing the buts downwards, and pointing

down the slope. We have found our own brush drains to last many years, decay being, in a great measure, prevented by exclusion from the air.

We have just had a quantity of two inch sole tile weighed, such as is manufactured at Palmyra, N. Y., and which is nearly half an inch thick, and find it to average a little less than two pounds to the foot, and consequently a ton would lay about 1100 feet.

Stabling and Feeding Cows in Winter.

Can you inform me through the columns of the Country Gentleman how I can prevent my cows from lying in their manure when in the stable? I have tried every way that I can think of, but all to no purpose—for every morning their udders are so filthy that it would take five or ten minutes and one gallon of water to wash them clean. My stable floor is good, slopes back three inches in ten feet. I clean it out every day and cover over with clean straw. Unless I can find some remedy I shall have to abandon stabling altogether.

Should cows be fed before or after milking, or does it make any difference in product of milk or butter?

Ought cows to be subjected to long stripping, or not? I have a heifer with her first calf, that is disposed to strip a long time, and I do not wish to spend the time unless the product of milk is increased thereby.

Also, which is the best straw and hay cutter for general use with which you are acquainted; what is the price, and where can it be obtained? Or will it pay at all to cut feed for two or three cows, when you have plenty of work to occupy your whole time, at 75 cents per day, and can purchase hay at seven or eight dollars per ton?

Please give me all the information you can on the above subjects, which will be thankfully received by

A SUBSCRIBER. *Connellsville, Pa.*

To keep cows clean during the period of their stabling, we have found it absolutely necessary to clean the stables at least twice a day, and more especially in the evening just before spreading their beds of straw for the night. They should also have room enough to select a clean place to lie in, and be tied so as to lie down and rise again without the least inconvenience. With these precautions, we have no difficulty in keeping them clean.

The udder of some cows is more easily drained than of others. Where necessary for completely emptying the udder, long-stripping must not be neglected. Cows which are not milked clean, diminish in quantity, and soon "dry up." The process of stripping may possibly be continued so long as to be a waste of time, but we have never known an occurrence of this sort, for not one milker in twenty does the work thoroughly enough, especially towards the close of the year, when the supplies are given down more slowly.

A cheap and perfect straw-cutter has not yet been made. Those manufactured by Emery, Ruggles, and others, consist of a cylinder of knives cutting on a roller of green hide, and cut with great ease and rapidity, and do not easily get out of order. They have but one serious defect—they will not cut shorter than an inch, which will do tolerably well for hay and straw, but not for corn-stalks. The price is six or seven dollars, and upwards. The cheaper ones do not cut so fast nor so short as those of higher price and more numerously furnished with knives. Sanford's straw-cutter, sold, if we mistake not, by Rapalje & Co., of Rochester, costs about 12 dollars, and consists of two cylinders of knives working into each other like the teeth of two cogwheels. It answers well for corn-stalks, crushing and cutting at one operation, but from some cause unknown to us, does not appear to have been extensively used. For cutting very short, we have not yet found a machine that is at once reasonably cheap, efficient, and durable for long use

Cutting fodder has several advantages. Straw and hay may be intermixed and both eaten together, and mastication rendered more complete and perfect; corn stalks, *if cut finely enough*, will be more thoroughly eaten, and the manure will be fine, instead of course, long, and unfit to apply till thoroughly rotted. We have no accurate experiments to show the precise amount saved by cutting;—an acquaintance informs us he finds the yearly saving in keeping a single horse, to be twenty dollars, out of fifty, formerly required; but we think his estimate too high. The public very much needs more accurate experiments on this subject.

The Reapers and National Prejudice.

It is very natural for a man to like his own performance better than that of others; to think his own home best, and to regard his own nation as the most wonderful in existence. A decent share of this feeling is a good thing, for it makes one satisfied with his situation, and prevents complaint; but when carried to excess, so as to lead to inordinate and empty boasting, like that of too many Yankees, or to one-sided illiberality, like that of too many British, it becomes disagreeable and disgusting. The best way to improve is to keep our own eyes wide open to our own faults and deficiences, and ready at all times to learn from the superiority of others. The London Times and its co-thinkers ridiculed at first the American productions at the London Crystal Palace, but afterwards had the magnanimity to acknowledge their mistake—which acknowledgment the Americans received with such eager boasting and retaliatory taunts as eclipsed all the honor of their victory. We believe very few American editors would have shown as much magnanimity as the London Times.

For the reasons above stated, we make it a rule to abstain from finding any fault with our trans-atlantic cousins, except to correct glaring errors. One of these glaring errors has lately occured in their attempt to claim all the credit of the invention of reaping machines. They have lately ascertained that an individual somewhere in Scotland, went to America many years ago, and took a *model* of a reaping machine, invented by Bell; from this, it is inferred that, as a matter of course, the American inventors obtained their first ideas of reaping machines, and that they only *copied* and put in operation this Scotch invention. Now the question naturally arises, How many of the American people would be likely to see a model, packed away in a man's trunk, and never used in practice? It was not many years ago that an English nursery-

man sent an ordered box of plants to a resident of western New-York, directed to be sent "by the *first wagon* from New-York city"—a distance of some 3 or 400 miles!! Not even so intelligent as this, is the supposition that the American nation consisted of a few individuals who assembled on the sea-shore and saw the Scotchman land with his model—instead of the fact, that many millions were scattered over a territory a thousand miles in extent, and that a hundred-thousandth part of this immense multitude would not be likely ever to get a glimpse of the model.

But suppose they had all seen it, and had afterwards succeeded in putting reaping machines into successful operation; to whom is the most credit to be awarded,—to those who merely propose; or to those who conquer the innumerable difficulties of successful introduction? The Marquis of Worcester proposed the steam-engine, but the credit is awarded to Newcomen and Watt, who reduced the thing to practice. Steamboats were not only proposed but actually made, long before Fulton rendered them practically useful; yet no one thinks of giving the credit to any man but Fulton. Cast-plows were long ago proposed and made; but to Wood belongs the entire credit of such a form as to bring them into successful use. While Fulton's experiment was yet doubtful, the odium of a visionary attempt, as it was thought, was cast upon him from all quarters, and all were willing to allow him the exclusive claim; when he triumphed, "*others* had thought of the same thing before." While Wood was contending with extraordinary difficulties, all were willing to accord to him the reproach of attempting the construction of plows of "brittle and worthless *pot-metal*;" when success crowned his efforts, then there were plenty of claimants for the honor. So with the reaper; when it stood in an obscure corner of the Glass Palace, an object of ridicule, the Yankees were allowed the entire merit of the invention; when it was afterwards sold by hundreds through Britain,—then, Bell the Scotchman invented it!

Now, what are the real merits of this same machine of Bell's, as compared with the American reapers? Bell's is admitted by the English writers to be as heavy of draught, from its own weight, as a cart heavily loaded with stones, and so far as cutting is concerned, is very much the same as Rugg's Propeller, which failed entirely at the Geneva trial; it had not, so far as we can learn, ever been used by half a dozen farmers, until Hussey's and McCormick's opened the way for its wider trial. At the same time, thousands of the American reapers had been used for years in this country, and proved eminently useful. The one, had never passed the boundary of a single farm; the others were known throughout half the Union. Under these circumstances, which was really the machine for practical use? And who deserves the credit of reducing the reaping machine, known in some shape or other even as far back as the days of Pliny, to a form for general utility?

In making these remarks, we disclaim any wish other than to place the matter in its true light, without regard to national boundaries; and still more do we disclaim any approval of the acrimonious and discreditable controversies in which some of our countrymen have taken part in the British agricultural journals.

Importation of Horses into New Brunswick.

We stated sometime last summer, that the Province of New-Brunswick had made an appropriation to the several district Agricultural Societies, on condition that they raised an equal amount by subscription, for the purpose of importing such horses as should be deemed best calculated to improve the breeds of the Province. The funds having been raised, our correspondent, Dr. W. A. CUMING, veterinary surgeon, of St. John, was sent out to Great Britain to make the selection and purchases. Mr. C. purchased eight very valuable horses, and arrived at St. John, on his return, on the 18th of October, in the Eudocia, from Liverpool, with five of the animals, three having perished in a hurricane, which was encountered when the vessel was eight days out. Those received, however, showed no signs of hard usage; and they are, says a St. John paper, certainly noble specimens of the different breeds, and do much credit to Mr. CUMING'S skill and judgment.

Destroying Brakes or Ferns.

Being a constant reader of the *Country Gentleman*, and having an ardent desire to gain information, I would inquire through your columns, the best method of killing brakes on stony and rocky lands which cannot be plowed or cultivated. D. C. L. *Essex, Vt.*

We have no practical experience in this matter, and could recommend nothing better than to grub them up by hand, which would be next to impossible where they are very abundant. We question if there is any "royal road" to their destruction; but our correspondents who have more practical knowledge, can perhaps furnish something valuable.

Smut in Wheat.

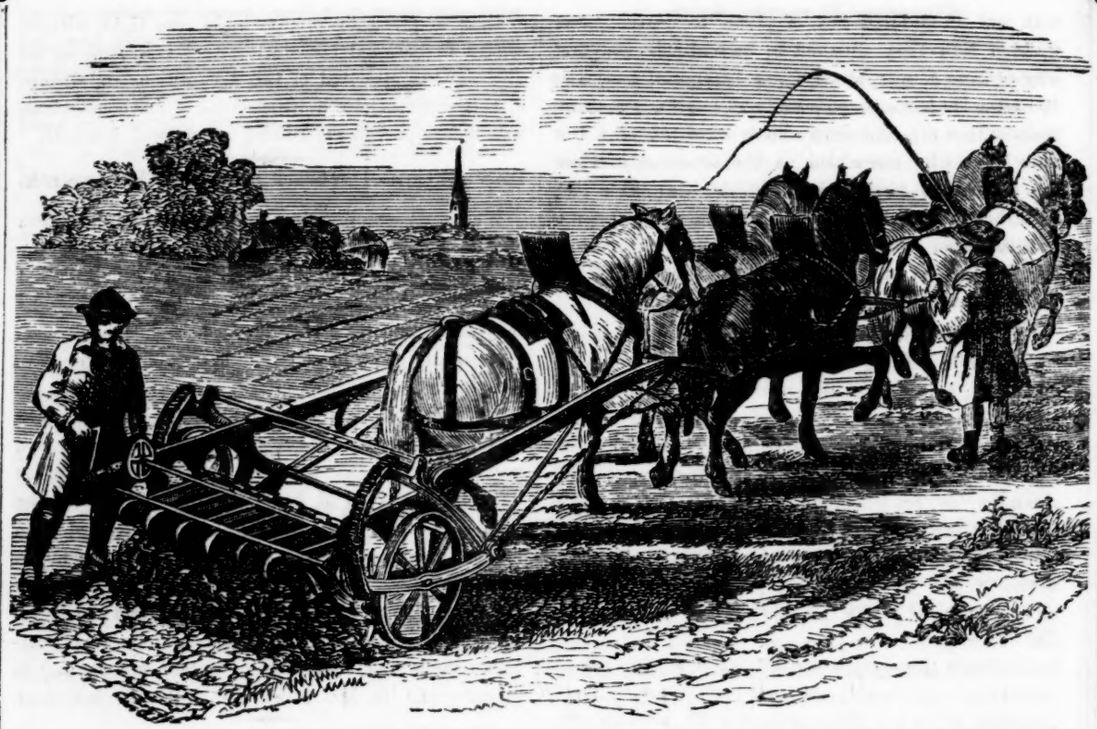
MESSRS. EDITORS—Please inform me as to the supposed cause of smut in wheat, and a preventive or remedy.—G. *Marion Co., O. T., Sept.* 1853.

Smut in wheat is a fungus or cryptogamous plant like the mushroom, which grows in the grain and consumes it. It may be very easily and effectually prevented by washing the seed well, then washing it in brine, and finally rolling it in powdered or air-slacked lime. Even washing, alone, if thoroughly done, will nearly remove the smut.

South Down Sheep.

Can you or some of your numerous subscribers inform me, through the pages of the Cultivator, where I can get the full blooded South Down sheep, and what they will cost a pair?—S. D. *Jefferson co., Ind.*

South Down sheep can be procured of L. G. MORRIS, Fordham, Westchester county, N. Y.; Col. J. M. SHERWOOD, Auburn, N. Y.; Z. B. WAKEMAN, Little Falls, N. Y.; and several other breeders in this state. The prices vary from $20 to $100 or more per pair, according to quality.



Samuelson's Rotary Digger.

In a recent number we copied the remarks of the Mark Lane Express upon the practical working of Samuelson's Digging Machine. We present a superior cut of the machine, which will show more clearly than any description its operation. It is the invention of Mr. B. Samuelson, of Banbury, England, and consists of a simple frame running on two wheels, which, in their revolution, cause a series of forks or prongs to loosen and pulverize the earth to a depth of eight or ten inches, and over a width of three feet. Five or six horses, according to the state of the soil, attended by two men, are able to work over five or six acres a day. As the prongs come round they bring up the soil and let it fall backward in a well pulverized and mixed state, and to keep them free from earth, each circle of prongs works between a corresponding set of stationary clearing teeth on the frame. We are informed that at a trial near Banbury, on a "friable calcareous loam, pretty stony, and fallow, after an autumnal plowing, and with here and there some couch grass upon it, after the passage of the machine, the pedestrian sank in the soil, as he walked, two or three inches; and on testing it with a walking stick, it showed a looseness down to eight or nine inches." It has been extensively introduced into Scotland, and the Royal Agricultural Society of England awarded it a silver medal after a thorough trial at Gloucester. The perspective sketch, represents the Digger at work in the field. The depth of entrance of the prongs is adjusted by a handle, geared to a pinion, working in a segmental tooth-rack on the frame-work. It will be readily apparent that this machine will pulverize the soil more effectually than the plow and the harrow. The only objection to it is the great amount of power necessary to operate it, but this may be obviated by reducing the width of the machine or simplifying the machinery. It will undoubtedly be many years before an implement of this sort will supercede the time-honored plow; but the principle of digging the soil and reducing it to a finer tilth than it is possible for the plow to do, is fully established. The more thoroughly the soil can be stirred, mixed and pulverized, the greater will be its productiveness.

Plaster for Wheat.

Could you or any of your numerous subscribers inform me through The Cultivator, whether plaster sown on winter grain in the fall would be beneficial or not; if so, how much would be required to the acre? A. D.

We know of but few experiments in the application of this manure for wheat, and none of these were successful enough to warrant its use. We believe this has been the usual result everywhere. Early spring would doubtless be the best time, should our correspondent wish to try the experiment. Its beneficial effects may be communicated to wheat in a much more effectual way, namely, by applying the plaster to clover, and then turning under the clover as a manuring for the following wheat crop. About one bushel per acre commonly produces as beneficial a result as a larger quantity, and the best time is in the spring, just as the young plants are beginning to throw out their first spring leaves.

WHEAT CROP IN WESTERN NEW-YORK.—Dr. LEE says that the single county of Monroe, N. Y., annually produces one-third more wheat than Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut, put together.

Wintering Domestic Animals.

Most important annual era is now commencing with the farmers of the whole country. They are beginning a period of nearly half a year, when all their domestic animals must be fed chiefly on dried or artificial food, and when cold, storms, wind, and snow and rain, are all operating to weaken or waste the flesh of their farm stock, unless a good system of protection and precaution is adopted at the outse..

The vastness and importance of this branch of successful husbandry, is almost beyond comprehension. The census returns inform us that 600 millions of dollars are invested in the live stock of the Union; yet this does not furnish a full index to their value, which is intimately blended with the manufacture of manure, the main-spring in the production of all crops—and on them depend the forces, the general economy, and not only their direct profits in the sale of butter, cheese, wool, beef, pork, lard and tallow, and living animals, but indirectly the profits of all kinds of grain and root-growing, with which the animals are as intimately connected as the woof and the warp of the weaver's fabric.

The losses from the bad wintering of farm stock are enormous. Estimating that one-half of their value is required to carry them through the average four months of winter, (which in the extreme north is nearly six months,) we have three hundred millions of dollars to be expended upon them the country over, between the present time and the period of spring pasture. Would it not be safe to say one-third, or one hundred millions,—enough to make a Pacific railway,—are annually lost, literally sunk,—by bad management? Let us look a little at this part of the subject.

We have shown on former occasions why animals must consume food to sustain their warmth in cold weather, as well as for the support of their flesh. A man who rides in an open cutter in the cold all the day, although nearly destitute of exercise, will find it necessary to eat nearly twice as much as when taking as much exercise in a warm stove-room; and every farm laborer has found that he eats more in chopping cord-wood in the wintry forest, than in cradling wheat under a burning sun. It is the same with animals; when exposed to wind and storms, a large portion of the food they consume, must of necessity go to keep up the heat; and the farmer must either give them *additional* food, or see them decline in flesh—for the warmth is a part of vitality, and must be kept up, flesh or no flesh, while the animal lives.

Careful observers who have provided ample and comfortable shelter, think that one-third of the food of cattle is saved by such protection, the condition as to flesh remaining the same as when subjected to exposure. When they are suffered to lie on wet straw, or on damp ground with no straw at all, the cold affects their wet bodies still more. Milch cows give more and better milk, when well cared for, and horses are stronger and more lively for work. Sheep furnish finer wool and more of it, fewer perish by winter, and all come out in better condition in spring, when protected from the blasts of the wintry tempests; a skilful sheep raiser thinks his sheep-barns and sheds were thus paid for in two winters. The wintering of store pigs would be a far less expensive item of farm economy, if warm, comfortable and *clean* quarters were always assigned them.

In addition to the immediate and present loss from exposure, there is another formidable loss, of a more remote but not less real character. This is the check or stunting in growth which young animals receive, and which they never get over. Let two be fed and treated precisely alike, at all periods of their growth, with the exception of exposing one to snow, rain, mud, and discomfort for a single winter, while the other has warm dry quarters and good regular food; and that winter will be impressed upon them, as an indelible historical mark, in their relative sizes, for the rest of their lives. To say nothing about the loss of fodder by treading in mud, feeding irregularly or in over and under doses, and out of time, and other wasteful practices, we are satisfied that the above-mentioned causes occasion a waste of at least one-third of the wintering, and that the hundred-million estimate is not extravagant.

Why will farmers continue longer to pursue this costly, slip-shod treatment? Why not lay down for themselves a set of rules, something like the following, and show that they have industry and energy to practice them with rigid exactness:

1. To shelter all fodder well, that the weather may not waste its strength.
2. To shelter well the straw for litter, that it may be always dry and comfortable.
3. To feed regularly, both as to time and quantity, that the animals may never fret for delayed meals, or from stinted supplies.
4. To give every night a good bed of dry litter, that animals may not become chilly from dampness.
5. To keep their places of repose clean and their hides well curried, that they may not suffer the discomfort of filth.
6. To provide ample racks and feeding-boxes to prevent a waste of roots, meal, and fodder.
7. To give special attention to growing animals, that they may not become irrecoverably stunted.

Town Agricultural Societies.

Messrs. Editors—In your article on "Agricultural Fairs," in a recent number of the Country Gentleman, a few remarks were made upon the importance of Town Societies, which, in consequence of the lack of public appreciation, are particularly worthy of additional remark.

State and County Societies reveal to us the improved stock, the improved farm implements and farm products of an enlightened agriculture; but they do not bring practical intelligence to the understanding of each individual member. This is the peculiar province

of the town society, and should be the end and aim of all such organizations.

Town Societies should, in our judgment, be formed with no reference to exhibitions; but rather for mutual improvement in the various departments of science and art, having reference to their peculiar vocation. A suitable library, to which all members shall have free access, is the first and all important desideratum in such township organizations. Of those devoted to agricultural pursuits, there is probably not one in a thousand so thoroughly posted in knowledge as to realize the greatest amount of profit at present attainable in the various departments of his labor. The means of information are not at hand, and thousands go plodding on, from year to year, without even the shadow of improvement.

A thorough knowledge of the best known system of rotation of crops, the best method of saving and applying manure, and the best method of preparing the soil for the reception of the seed, would, if practically put in requisition in every community, very considerably enhance agricultural products, which enhancement would, in the aggregate, amount to no inconsiderable number of dollars. An acquaintance with the best system of improving stock, of developing, to a full extent, their healthy growth, as well as the best methods of remedying their various diseases, would be equally prolific of results, in no small degree enhancing the profits of the grazier.

A knowledge of the present state of pomological science would very materially enhance the luxuries of home and the profits of the orchard. But few are aware of the disadvantages which ignorance of such knowledge entails. Many trees in transplanting, are unnecessarily lost, old orchards are not half so prolific as good culture would make them; and new selections are, too often, most injudiciously made. We have known whole orchards set with the Newtown pippin, in a soil nearly destitute of lime, and others to the blue pearmain; in either case the loss is at least ninety per cent of what might have been realized from a judicious selection, which an acquaintance with such works as J. J. Thomas's, Barry's, or Downing's would have enabled them to have made.

In the construction of buildings, useless expense is often incurred, even at the expense of convenience and beauty, which a fair knowledge of rural architecture would have prevented.

Kitchen gardening is lamentably neglected by professed agriculturists, not only through a mistaken notion of its unprofitableness, but through ignorance of the most successful means of culture, and the luxuries which such culture affords.

Facilties for such and other important information, a Town Agricultural Society can easily provide. At a trifling individual expense, such works as "Stephens's Book of the Farm," "Dana's Muck Manual," or "Browne's American Muck Book," "Johnson's Chemistry" and his "Practical Agriculture," "Allen's American Farm Book," Youatt or Allen on the "Diseases of Domestic Animals," Thomas on "Fruit and Fruit Trees," Allen or Downing on "Rural Architecture," "Buist's Kitchen Garden," "Nash's Progressive Farmer," "Falkner's Farmer's Manual," and many other equally important agricultural works may be placed within the reach of each member. Such an investment would pay in beneficial, practical results an hundred fold.

In addition to providing the means of information, Town societies may accomplish much by giving each member something to do in experimental research. Much additional information may thus be elicited, at least of local if not of general interest, adding to the rapidly increasing stock of agricultural knowledge.—Yours, &c., O. C. GIBBS, M. D. *Perry, Lake Co., Ohio.*

Agricultural Machinery.

The last number of the Journal of the N. Y. State Agricultural Society contains the interesting and valuable Report of JOHN STANTON GOULD, Chairman of the Committee on Agricultural Machinery. Among other contrivances noticed, is an account of the portable *Cider Mill*, exhibited by John Jones, of Little Falls, Herkimer county, N. Y. What appears to us the most remarkable, is the great number of useful purposes to which this machine may be applied. It will grind apples into pomace, mash potatoes, turneps and carrots, grind meat for sausages, and pulverize sugar. The press may be applied to pressing tallow, lard, currants for wine or jelly, and to wringing clothes. There are two sizes, one for a horse, and the other to be worked by hand. The hand mill may be moved from place to place as easily as a common wheel-barrow. The exhibitor ground with one of these machines four barrels of pomace in eight minutes, in presence of the committee, "without any great effort," the pomace being much finer than usual. One man may make five barrels of cider in a day. The committee remark, that by the aid of one of these machines, the farmer may keep himself in sweet cider the year round (fermented he should never drink); can make it at "odd times," save his wind-falls, or at any time any surplus of apples threatened with decay.—Price of the horse machine, $60; hand machine, $25.

An improvement is noticed in Fairbanks's *Hay Scales*; the usual notches on the beam are dispensed with; the poise sliding along smoothly, an index pointing downwards to the figures on the side of the beam, rendering the operation more expeditious and more accurate than where the poise must be *lifted* from notch to notch.

Root Washers—We have been long of the opinion that a good root washer, by separating rapidly the dirt from potatoes, when first dug (in connection with subsequent ventilation), would contribute more than any thing else to preserve harvested potatoes from the rot. We have hoped to see something offered for sale, like Croskill's Archimedean Root Washer, in England. The only thing of the kind mentioned by the committee is Bentley's Hydraulic Steamer and Washer, which is highly commended, but the mode of construction or operation is not described.

Drills—A contrivance is mentioned for dropping plaster, or other concentrated manure, over but not in contact with the seed, the drill closing over and partially covering the seed before the plaster tube deposits its contents. This may prove of advantage in applying guano or other highly fertilizing compounds, too strong for immediate contact with the seed. This drill was exhibited by C. A. Wakefield, of Elizabethtown, N. J., and has an opening in the back of the machine, enabling the operator to see at any moment whether the machine is dropping or not. Seymour & Co.'s latest improved drill is noticed, being the only machine that at one operation sows grass seed broadcast, drills in the grain, sows any pulverized manure, and is capable of being fitted as a horse hoe, like Garrett's. Price of the whole, $130.

Helderbergh Farming.

RENSSELAERVILLE, Dec. 7, 1853.

EDITORS COUNTRY GENTLEMAN—In the June No. of the Cultivator, you published some account of my method of manufacturing manure from spent tan-bark. I believe I promised, when leisure would permit, to give you some of the results. The season of the year has now arrived when the farmer is afforded some relaxation from "weary toil," and some of the long evenings cannot be better employed, perhaps, than by communicating such results, of expense and labor, as shall interest and perhaps instruct our fellow farmers in the great enterprise in which we are engaged.

I would not have you think this is book-farming. If I communicate facts and results, and others, by reading an account of my experiment in the columns of the Cultivator, are thereby induced to adopt some system of farming different from the "old routine," don't call that book-farming. This much I will now say, I have learned very much by conversing with my fellow farmers as to their method of management for different crops. I became, when I was a boy, not passionately, but enthusiastically fond of such pursuits, by reading books on English argiculture, especially some articles in the Edinburgh Encyclopædia. I have never been favored with an opportunity of satisfying my longing desires in such pursuits in any other district of our broad land, save on these Helderbergh hills. As forbidding as this region may seem to you and some of your readers, I think I shall be able to satisfy you and them too, before I get through, that this region is as valuable for farming purposes as any other inland district in the state, the Genesee valley not excepted.

I must hasten to give you some account of my system of husbandry. I would remark that the eighty acres I occupy (forty too much) were, until ten years since, one of those half-lots on which, for time out of mind, a system of skinning had been practiced, and which is still too much practiced, by most of the farmers in this vicinity. My object has not been to make money, but to put the land in such condition as that money might be made from it. The process is slow but cheering, as from year to year we witness the tall and taller grass, the deep and deeper green of the verdure, the heavy and heavier crops, and realize that this process can be witnessed ad infinitum by the addition of a sufficient quantity of manure. To supply a deficiency in this article, led me to adopt the use of spent tan-bark, as being the most convenient, after having exhausted the road sides for some considerable distance.

The first thing that struck me as indispensable was, to clear the land of stones. This was a huge undertaking, but large and small, they must be subdued.

All the little money we could raise from eggs and butter and poultry, &c., had to go to buy flour in the Albany market. (I should have remarked, that one principle I adopted was, the farm should pay its own expenses and support the family.) To expend every shilling of money to buy bread, was ruinous. I begin therefore with wheat. To succeed in this crop, I have adopted the following as a general system. First, sward land, to be plowed deep in the spring for corn, well harrowed with a short tooth drag, so as not to invert the sod—manure in the hill, plaster, ashes; anything that will produce a large growth is applied. A large growth is important I conceive in two respects, aside from the amount of crops. It fructifies the soil and prevents the growth of weeds, and also gives material for making manure. It is a given axiom that the more we can raise from a given quantity of land, the more stock we can keep on the same land, and thus increase our quantity of manure, and also increase our capacity to make the land produce more the next season. The corn harvested, the land is now prepared for another crop, both of which look towards wheat, as the grand point aimed at, in this rotation. The corn comes off too late, in these parts, to sow wheat immediately after it. I adopt marrowfat peas as the next rotation, for several reasons. First, they come off in August, early enough to prepare the ground for the wheat crop. Secondly, the land is well prepared for the growth of peas. Thirdly, they are ready by the time milk from the dairy begins to fail, to supply this deficiency in fattening early pigs. The crop of peas secured, the next thing is to prepare the ground farther for the wheat crop. There is now sufficient time to be thorough, and to make the time hold out, I take but a small bit of land, holding the doctrine in practice, that everybody preaches, "that two acres well tilled is better than four acres run over." This bit of land is first thoroughly cleared of stone, then plowed as deep as we can make the plow run, frequently employing a hand to stand on the end of the beam to put it down to the greatest depth possible. This operation requires a very stiff pair of oxen. To make it still more effectual, in the absence of a sub-soil plow, I take a long pointed plow with a set clevis and a horse team to plow what we call two "furrows in a row." I keep crowbars, shovels, chains and levers convenient, so that any stone that may be lurking near the reach of the plows, (and there are sometimes many of them,) may be hauled out to the top of the ground. Suppose now the ground plowed in the manner above described, the stone are then removed and the ground smoothed down with a harrow, and is then ready to receive the manure of a year old. You see that it will be fine and well rotted at this age. It is put on in heaps in regular rows, at the rate of about 25 or 30 loads to the acre. When all carted on in regular rows and even sized heaps, I feel a wonderful joy in contemplating it. But I must hasten or my letter will be too long, if not so already. The next thing in order is the seed, and I consider this of the first importance. Out of two or three bushels, I sift with a screen all that can be made to go through its meshes—cockle, chess, wild peas, sorrel, all the small grains of wheat, so that nothing is left but the large and plump berries of the wheat. (I have at present the red bald, but any kind does well with this management.) This wheat is then washed in a strong brine and rolled in lime in order to destroy the smut, if any, or plaster will do, to give it

a start. The manure is then spread in rows. A cloudy day is preferred, and a two-horse cultivator, well loaded with stone, if not heavy enough, is passed over the land as fast as the manure is spread. This mixes it completely with the soil. The wheat is then sowed broadcast, at about two bushels to the acre, and harrowed in in the same way. This done, a wagon or cart is passed over the ground and every stone of any size, worthy the name, is taken off; the ground furrowed both ways, if level, at an interval of 18 or 20 feet; a heavy roller is then passed over the whole and the crop is in. In my next I will give you the rotation still farther, (this is the first crop several years back,) and show how I think 50 bushels to the acre can be realized without much expense, as we now have the land prepared and in a fit state for farming purposes. Very respectfully yours, G. W. DURANT.

Depth for Burying Manure.

Men are divided as to the proper depth of burying manure. Some hold that it sinks in the soil, is washed downward by the leaching rains, and should therefore be applied near or at the surface. Others assert that its volatile and most valuable parts rise by fermentation, and that consequently it should be buried deep. Now it usually happens when doctors disagree that both are partly right and partly wrong; but in the present instance, they are both a little in the right, and a great deal in the wrong.

Manure usually stays very nearly where it is put. If buried near the surface, it remains near the surface; if buried deep, *there* it remains; if plowed under in large lumps, it has but little power to rise, sink, or in any other way to intermix itself, and hence the reason that thorough pulverization or harrowing before manure is turned under gives a result in large crops.

The power which clay has to absorb the fertilizing portions of manure, is very great. Soils which possess a medium amount of clay, or loam, with a medium degree of tenacity, will absorb all that is valuable in ordinary yard manure, equal to nearly their own bulk. Forty loads of manure to the acre, form a heavy coating; yet this is only one load to four square rods, constituting a depth, when spread, of only one third of an inch. Consequently, when a coating of forty loads to the acre is plowed under, the volatile parts have only to pass one third of an inch or so, before they are all absorbed by the soil. Hence the error of supposing that they can possibly, in ordinary soils, rise or sink to any practicable depth. And hence also, the great importance of mixing manures very intimably through all parts of the soil, if plants are to get their full benefit, and not be over-fed at one part of their roots and starved at another.

There are many proofs of the correctness of the position here taken. We have made large piles of compost, consisting of one third rich stable manure, and two thirds of loam and turf, yet all the odor was completely retained, and not the slightest portion passing off could be perceived by the smell. We have buried large dead animals with a coating of only six inches of loam; not the faintest indication of the decomposition below ever reached the surface. On the other hand, the soil which forms the bottom of manure yards, is not found even within a few inches of the surface to be at all enriched by the piles of fertility which rest upon it.

The true rule for burying manure, is to place it just at such depth in the soil as the roots of the crop usually extend, which will vary with different plants. Some of the grasses, for instance, form a turf very near the surface, and hence an autumn top-dressing will soak in enough to benefit them essentially. Clover roots run deeper, and this crop is consequently but little benefited by top-dressings when of much size, except so far as they operate in keeping the surface moist. The roots of fruit trees are still deeper, and they derive but little advantage, except from manures well spaded or worked in. They however possess an important advantage over annuals and perennial rooted plants; by continuing in growth for successive years, those roots which happen to run into the region of fertility, soon throw out numerous fibres, and secure an amount of nourishment, of which annual plants, in consequence of their more limited powers of extension, are not able to avail themselves.

There are, however, not many crops which do not need the full depth afforded by ordinary plowing; and hence the best practice for nearly all kinds of culture, is to spread the manure well, harrow it most thoroughly, in order to break it as finely as possible, and at the same time to mix it intimately with the surface; then turn it under by ordinary plowing, and the lower half of the inverted earth will furnish a thoroughly enriched bed for the roots to penetrate. If a greater depth of fertility is needed than ordinary plowing affords, the coat of harrowed manure may be thrown under ten or twelve inches by means of a double mouldboard or Michigan plow; and then another coat of manure spread, harrowed, and plowed under by a light or gang-plow. The young plants of the crop are thrown rapidly forward by the upper stratum of manure, and at a later stage of growth, are equally stimulated by the lower stratum.

New-York State Ag. Society.

WINTER MEETING.

The annual meeting and Winter Exhibition of the New-York State Ag. Society, will be held in this city on the 7th, 8th and 9th days of February next. At this meeting a report is to be made by a committee, appointed at the last annual meeting, to consider the propriety of locating the State Fairs at two or three places, and the erection of permanent fixtures for the show. This and other matters will render the ensuing meeting one of unusual interest, and we cannot but hope that all sections of the state will be properly represented on the occasion.

The premiums to be awarded, are those on Farms,

Experiments, Farm Crops, Samples of Grains and Seeds, Fat Stock, Dressed Meats and Dressed Poultry, Butter, Cheese, &c. We annex a list of the premiums on such articles as are to be exhibited: --

GRAINS AND SEEDS.

[*Five Bushels of each to be Exhibited.*]

Winter Wheat—1st prize, $8; 2d, $5; 3d, $3.

Spring Wheat—The same as above.

For *Rye*, 4-rowed and 2-rowed *Barley*, *Oats*, *Yellow* and *White Corn*, *Peas*, *Beans*, *Large* and *Small Clover Seed*, *Timothy Seed* and *Flax Seed*—three premiums of $5, $3 and $2 on each.

FAT STOCK.

Best fat ox, 4 years old and upwards,	$30
2d do	25
3d do	20
Best fat steer, 3 years old,	25
2d do	20
3d do	15
Best fat cow, 4 years and upwards,	20
2d do	15
3d do	10
Best fat heifer, 3 years old,	15
2d do	10
3d do	5
Best spayed heifer, 3 years old,	15
2d do	10
3d do	5
Three best long-wooled sheep, 2 years and upwards,	10
2d do	8
3d do	5
Three best long-wooled sheep under 2 years,	8
2d do	5
3d do	3
Three best middle-wooled, 2 years old and upwards,	10
2d do	8
3d do	5
Three best middle-wooled sheep under 2 years,	8
2d do	5
3d do	3
Three best cross breed sheep, 2 years and upwards,	10
2d do	8
3d do	5
Three best cross-breed sheep, under 2 years,	8
2d do	5
3d do	3

Persons competing for premiums on Live Stock must give a full and detailed statement of the time and manner of feeding the animal; the materials of food consumed, in quality, quantity and value; the breed of the animal, if known; the weight, if practicable, when the feeding was commenced, and the weight at the time of the exhibition, must be given, and all to be verified by affidavit; and unless these statements are furnished, premiums will not be awarded.

DRESSED MEETS AND POULTRY.

Best carcass of long-wooled sheep,*	$5
2d best do,	3
Best carcass of middle-wooled sheep,	5
2d best do,	3
Best carcass of cross-breed,	5
2d best do,	3
Best dressed hog, weighing over 350 lbs.,	5
2d best do,	3
Best dressed hog, less than 350 lbs.,	5
2d best do,	3
Best pair of dressed turkeys,*	2
2d best do,	1
Best pair of dressed geese,	2
2d best do,	1
Best pair of dressed ducks,	2
2d best do,	1
Best pair of dressed capons,	2
2d best do,	1
Best pair of dressed fowls,	2
2d best do,	1

* The mutton and poultry, when dressed, to have head and feet left on.

Culture of the Onion.

DANVERS, MASS., Dec. 5, 1853.

MESSRS. EDITORS—In reply to the inquiries made by C. N. B., of Orient, L. I., in your paper of Dec. 1st, I beg leave to say, that I have given much attention to the growing of *onions* for a dozen years past, and can say with confidence, that there does not exist the same necessity for *a rotation of crops* in the growing of onions, as there does in most other crops. I am aware, that I express an opinion directly at variance with that expressed by your correspondent; nevertheless, the large quantity grown in this vicinity (not less than 100,000 barrels annually), and my frequent intercourse with those who have managed their cultivation, makes me quite as confident in this matter as any other of vegetable culture. I do know fields on which onions have been grown for *twenty years* or more successively, without any apparent diminution of crop, by reason of the continued culture. So general is the impression that onions vary from other crops in this particular, that it has become almost a proverb, that "onions will do well without a change of crops."

That benefit will accrue from varying the manures applied, there can be no doubt; and that liberal dressings of manure (say, from five to eight cords to an acre each year,) is also perfectly clear. Perhaps such application of manure remedies the objection naturally arising from the exhausting of the ingredients necessary for supporting the crop.

Your correspondent asks—"What is muscle bed?" I understand it to be mud at the bottom of salt water rivers and creeks, filled with the muscle or the shells of muscles. Thousands of loads of this material are annually collected in this vicinity, and applied to the lands. It is considered a valuable dressing for onion lands, once in half a dozen years; and some apply it oftener. It is certainly a valuable dressing in apple orchards, as I have myself witnessed.

Your correspondent speaks of his onions *rotting*. No such affection troubles our crop, excepting *a rot* occasioned by the imbedding of a small maggot in the bulb of the young plant.

The *red*, the *white* and the *silver skin onions* are the varieties usually grown by the cultivators in this neighborhood. There are other varieties of onions, but I am not familiar with their culture.

Your correspondent asks for information as to *soiling of cattle*. He will find it in a paper prepared by Hon. JOSIAH QUINCY,* of Quincy, who has practiced it for thirty years or more, and who understands the subject, root and branch. This communication was published in 1852, among the papers of the Norfolk County Ag. Society, and afterwards in the Mass. Ag. Transactions for 1852. Mr. Quincy's views are entitled to the highest regard.

Having been much instructed by your valuable paper the last year, I cheerfully forward these remarks for its columns. Very resp'y, your ob't serv't. J. W. PROCTOR.

* We shall soon insert this valuable paper.—EDS.

Design for a Spacious Country-House.

Our readers will remember when the common style of building, many years ago, was the simple square box, or clap-boarded frame, perforated with long ranges of numerous windows. And as a general thing, the greater the number of windows, or the more nearly the dwelling approached a cotton factory in external appearance, the more aristocratic of course was its expression. At a later date, a supposed improvement was made, by adding four tall, elaborate Grecian columns to one side of these perforated boxes, reminding one of the fine new patch on the old and tattered coat. Still later, the Gothic style found its way pretty generally into the more tasteful country erections, and this immediately led to all kinds of fantastic imitations. If a simple, sensible Gothic house was an object of attraction, then certainly it was thought that carrying the fashion to its utmost extreme, would be prodigiously fine. The result was that dwellings began to appear like mushrooms all over the country, some of them with their flimsy, floridly carved verge boards; others, with gables so numerous as to convey the idea of a hottentot village placed upon the roof; others again, had such extra fashionably steep roofs and short posts, as to look like a very long extinguisher on a very short candle.

At the same time we like a deviation from the dull monotony of blank walls, we want to see a sensible, common sense application of architectural forms. We have never seen the design of a Gothic dwelling, that excelled in this desirable particular, the one represented at the head of this article, and which we copy from a former volume of the Horticulturist. The moderate steepness of its roof—the agreeable proportion between roof and walls—the variety in its external expression and its perfect freedom from stiffness and formality—and its entire freedom from elaborate ornament, all produce an effect rarely to be met with. It is intended to be built of common quarry stone, the whole to be finished in a simple and rather rustic manner, furnishing a dwelling of this extent at a moderate cost. Where quarry stone is not near at hand, it may be built of brick, and rough-cast.

The plan of the principal floor is shown in Fig. 2, where the dining-hall, (a kind of hall and dining room combined,) or the office (or ante room) A, are entered

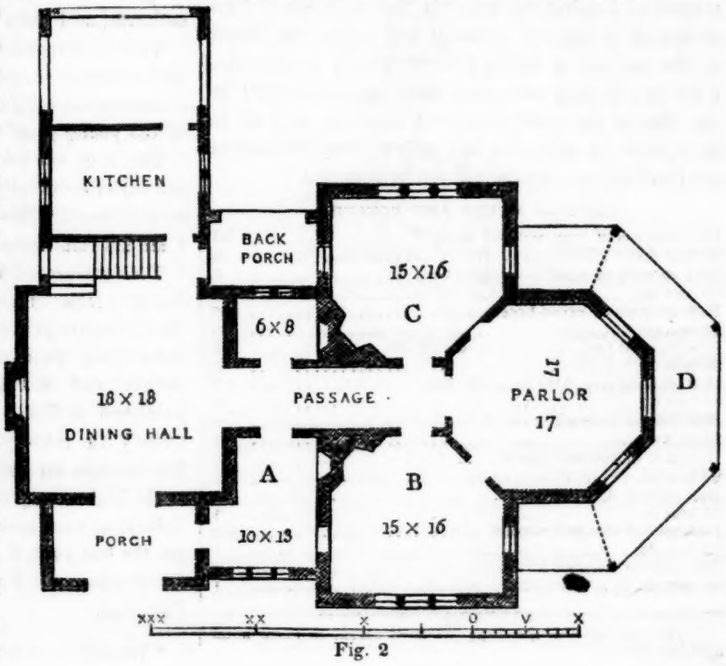


Fig. 2

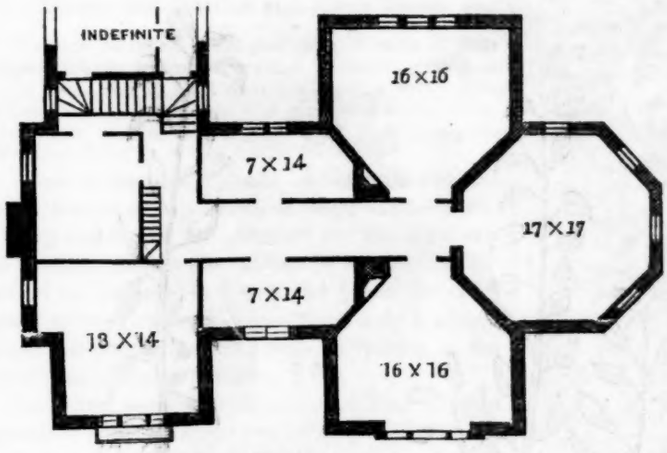


Fig. 3.

from the porch. The octagonal parlor, the library B, and the bed-room C, are all of easy access from the central passage. The veranda D is entered by windows reaching down to the floor.

The plan of the second story is exhibited in Fig. 3, and shows five large bed rooms, and two smaller ones—furnishing, altogether, ample accommodations for a considerable family, and occasional visitors. This dwelling is adapted to the wants of the larger and more wealthy class of farmers.

Pyramidal Pear Trees.

This mode of training may be applied to trees growing on both pear and quince stocks. We never saw handsomer pyramids than those of Hovey & Co., of Boston, worked on the pear. They make larger and more vigorous trees than on quince, and with the exception of the few varieties which seem to be peculiarly at home on quince stocks, more durable ones. Kept properly pruned, they need never become too large for garden planting. When the choice can be made we would recommend both kinds of stocks for pyramids, according to the variety under propagation.

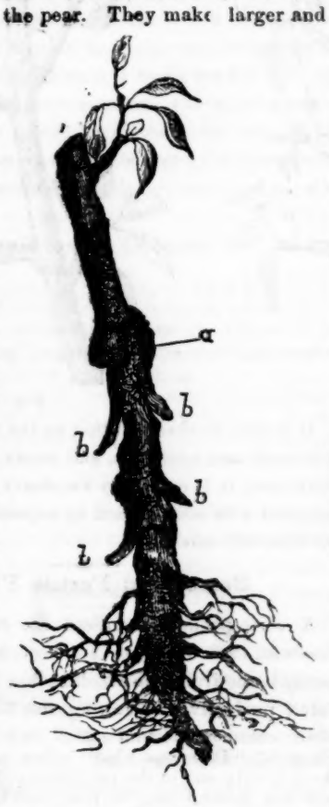


Fig. 1.

Quince should be chos'n for such sorts as Louise Bonne Jersey, Diel, Angouleme, Easter Beurre, &c.; and pear for Bartlett, Doyenné d' Eté, Winter Nelis, Aremberg, Onondaga, &c., which often grow well on quince, but more so, generally on pear. Flemish Beauty, Bosc, Autumn Paradise, Marie Louise, Washington and others, will grow only on pear stocks, except in very rare cases. Even double-worked trees of the latter varieties often fail or dwindle after a lapse of some years.

Those who have seen very handsome specimens of the Norway fir, when fifteen or twenty feet high, may acquire from them a good idea of the form of a handsome pyramid for the pear, except that the lower branches should not sweep the ground, nor the leading shoot or apex be quite so long and slender.

Training and pruning are now much better understood, generally, than five years ago; yet there is not

Fig. 2.

one dwarf tree in twenty that is rightly managed, and we have frequent inquiries for simple directions on this point. The accompanying figures, and the

following explanations, may therefore prove of service:—

Pear trees on quince stocks should be set with the place of union even with or a little below the surface of the earth. It often happens, however, that the stock is destitute of roots for some inches below this point, as shown in Fig. 1, *a* being the place of junction. In order to induce the emission of roots, the stem may be tongued by raising about one inch of the bark, as shown at *b b*, and keeping it open by a small chip or piece of gravel. Roots will form without this care, but less speedily.

After the stem has grown one year, it is cut down to a foot or foot and-a-half, which induces a crop of side-shoots near the ground Early in summer, the ends of the upper ones are pinched off, except one leader; leaving those below, which otherwise are apt to be the smallest and weakest, to develop and grow strong; after which they too are pinched off. This gives the two year trees an appearance like Fig. 2, which is the incipient pyramid.

The third year, the side-branches will of themselves throw out three or four shoots, as shown in Fig. 3; these must be treated like the two year tree, that is, a leader must be left of each, and the others nipped off at the ends, like Fig. 4 The terminal buds on these pinched shoots may break and send out second shoots; if so, these must be again pinched off shorter than at the first.

Fig. 3

Fig. 4.

Trees are often purchased at three years, ready trained as here described, which will of course save the purchaser this labor; but the same principles must be applied in pruning the side-branches in subsequent years, the pinched shoots, *a a*, Fig. 4, forming fruit spurs, and beginning to afford moderate crops the third, fourth and fifth years. The trees should not be allowed to bear heavily till some years afterwards, as heavy fruiting and scant manuring is one reason of the short lives or feeble existence of many dwarf pear trees.

Upright growing trees, such as the Buffum, Louise Bonne Jersey, and Tyson, should have the leaders of the branches selected on the lower side, so as to give the pyramids a more spreading form; while with the Winkfield, Diel, Angouleme, and Glout Morceau, whose branches assume a more horizontal position, this precaution is not necessary.

In climates like ours, subject to deep snows, a naked stem a foot high, is safest from danger of splitting down.

It should be observed that as the roots of the quince are small and numerous, and never extend so far as pear roots, it is especially necessary that they be well supplied with nourishment by repeated manuring, and be kept well cultivated.

Barren and Fertile Flowers.

A correspondent mentions the case of a *Spanish chestnut*, that owing to a defect in the anthers, has rarely borne fruit, but which he has fertilized and rendered productive by dusting the flowers by a branch of the common chestnut cut off and brought ten miles. He adds, "Dicœcious plants often produce fruit when there is only one in the neighborhood. The Irish Yew now has several red berries; and the American Yew has been most productive,—yet I have only one plant of each. On the English Yew, I have never yet seen a berry.

"Juniperus is also dicœcious. I have but one plant of the *J. communis*, but it hangs full of berries. It may be a question, however, whether such seeds will grow? I cannot answer it. It seems strange that the berries should swell to their full size, if they are barren; yet there is a grape producing berries without seeds; and my chestnut has the *case* for the nut, but no *pit* or *kernel*."

Guano for Garden and Fruit Trees.

MESSRS. EDITORS—Will you state in some of your papers, which is best for garden purposes, guano or bone dust, and in what quantities to the acre; also, what quantity might safely be applied to small trees, say eight or ten feet high.—L. D. CLIFT, *Mystic Bridge, Conn.*

Guano is the most generally used of these two manures, because it contains a much larger number of fertilizing ingredients. When the soil and plants are such as to be benefited to good advantage by bone dust dissolved in sulphuric acid, this and guano are about equal in their effects; but bone dust simply is several times less powerful, varying with its fineness, at the same time it is more durable.

From two to three and sometimes four hundred pounds of guano are applied to ordinary crops per acre, and about the same quantity of the superphosphate of lime, or dissolved bones. From half a ton to a ton of bone dust may be applied to an acre. Young fruit trees, whose roots do not extend beyond a circle of eight or ten feet, or in other words, trees about eight or ten feet high, will be well manured if a quarter to half a pound of guano is spread over this space for each tree, and then carefully spaded into the soil in autumn, or early in spring. If dug in later, the lack of moisture will prevent its being diffused through the soil. It is in all cases safer and more economical to make a compost of the guano before application, by mixing it thoroughly with several times its bulk of soil, and an addition of stable manure to this mixture produces an excellent effect.

Fruit Trees in Oregon.

I want to know, through your paper, what kinds are the best winter fruits, the largest sizes and most profitable to grow for an orchard, and also the largest and best summer and fall apples, and also the best for cider, also the best time for transplanting.

I have one seedling pear tree, the seed of which was planted in the spring of 1848, and now it bears seven pears; and a seedling apple tree, planted in the spring of 1847, and this is the third crop of apples.—G. *Marion county, O. T., Sept.*, 1853.

For summer apples, the Red Astrachan, Sops of Wine, Sweet Bough and Toole's Indian Rareripe, stand first for good size and fair fruit. For autumn, Gravenstein, Porter, Dutch Mignonne, Hawley, Fall Pippin and Twenty Ounce. Haskell Sweet is the best and largest fall sweet apple. For winter, Belmont, Baldwin, Red Canada, Rhode Island Greening, White Bellflower, Rome Beauty, Swaar, Esopus Spitzenburgh, Northern Spy, Peck's Pleasant, Canada Reinette. Jonathan, although not large, is fair, handsome, and very productive. We are not acquainted with cider apples, but the last named would no doubt be one of the best. Hewes's Crab has had a high reputation for this purpose.

The best time for transplanting, is at any time between the fall of the leaf, in autumn, and the swelling of the buds, in spring. If the leaves do not fall soon after the cessation of growth, they may be stripped off artificially, and the work then performed with perfect safety.

Knevett's Giant Raspberry.

There are four varieties of the raspberry, all of great value and excellence, that much resemble each other in general appearance and character; these are the Fastolff, the Franconia, the Red Antwerp and Knevett's Giant. On the light soils which we occupy, we find the Fastolff particularly fine, and the Franconia of nearly equal excellence, and harder for market. We have never found either of them tender, in a climate where the thermometer usually sinks, sometime during winter, down as low as five or six degrees below zero, and in severe winters to ten or twelve below. The Red Antwerp is superior to either as a *market* sort, more particular on account of its firmness of texture, but the berries are apt to be incomplete or imperfect, except on deep and strong, rather clayey, soils. Knevett's Giant is a newer sort, which resembles much the Red Antwerp, except that the plant is said to be decidedly hardier. The berries are rounder and less conically pointed. It needs further time to prove its fitness for general cultivation.

We ought to add, in speaking of the hardiness of these sorts, that the Franconia and the Red Antwerp are frequently injured in localities no colder than our own, owing, perhaps, to suddeness of thawing, or other causes. For this reason, they are usually protected by bending over late in autumn, and covering with an inch or two of earth, which is removed in spring about the time the ground thaws, or soon after.

Protecting Trees from Mice and Rabbits.

A writer in a former number of the Cultivator, recommends wrapping paper around the bodies of young

fruit trees, to prevent the depredations of mice and rabbits. Instead thereof, I have used *wide* spiral-formed shavings, as they come from the carpenter's plane, secured at top and bottom with a small 3 or 4 oz. tack. If one shaving does not extend sufficiently high, a second or third may be used in continuation. The shavings thus placed thereon will last two years. JAMES L. BOWMAN, *Brownsville, Pa., Dec.* 11, 1853.

Roses from Eyes.

Calling, a few weeks back, at the River-road Nursery, of Mr. H. H. WILLIAMS (late Jackson—known as one of the best commercial gardens for choice and good things round Cincinnati,) I was much struck with the expeditious and successful method practiced by that cultivator, in propagating roses. All the different classes are grown, but the greatest favorites are the Hardy Remontants and Bourbon varieties, which are known to be the hardest to strike from cuttings. As Mr. W. has but recently entered on the business for himself, his stock to propagate from was limited, and he desired to make the most of it and increase it as much as possible during the season.

His plan was, as soon as wood on his stock plants was sufficiently matured in the spring growth, to take it off, and instead of making cuttings, he used only a single eye, leaving about one or one and a half inch of wood below, and cutting off smoothly immediately above the eye, and slicing off part of the piece longitudinally opposite the eye or bud. These he plunges in sand to the top, leaving only the bud and leaf attached visible (in a brisk bottom heat); they soon callous and form roots; and Mr. W. at once plants them out into the open ground, without potting or anything, and gets in another batch. In this way he kept taking off successively from the parent stock as fast as they made wood. He showed us four different batches that had been taken off this season, planted thickly in rows, and fine growing young plants they were, varying in size and height, according to the respective time they had been planted. He stated that out of about 4,000, the far greater part of which were from eyes, he did not have over a hundred miss (which is a good take,) and he believed they made better and handsomer plants when struck in that way than by cuttings. One important point is observed to be necessary, that is, to keep the bottom heat the most active at first, so as to induce the formation of roots before the bud bursts; if the latter takes place before the roots are emitted, the plant is sure to go off, and *vice versa*.

Artificial heat, by means of hot water to raise bottom heat, is employed here during summer even, for propagating roses, as well as stove and green-house plants; and his plan for economy and efficiency is well worth being known and extensively practiced, and differs considerably in detail from any thing we had seen before. Altogether, we came away convinced that Mr. Williams is ahead of some of his compeers, in this branch of his business at least.—C. S., *Cincinnati, Nov.* 28, 1853.

Zauschneria Californica.

The Zauschneria is a native of California, and a herbaceous perennial, quite hardy, if planted in a situation where it is not much exposed to damp about the roots in the winter. Its habit is branching and bushy, growing about three feet high, and as its blossoms are large and numerous, it forms quite an attractive plant.

North Western Pomological Convention.

From a brief report of this Convention in the advertising sheet of the Western Horticultural Review, we perceive there were some 30 or 40 contributors of fruits, most of whose collections of apples varied from 40 to 150 varieties, and there were a number of collections of pears from 100 downwards. From a fine selection from these collections received through the kindness of Dr. Kennicott, we perceive, in accordance with the statement of this report, that those from Iowa and the more western districts, were much finer in appearance, generally, than specimens from the east

Among the results of the discussions on pears, we observe the following:—Bartlett, White Doyenné, Easter Beurré, Flemish Beauty, Seckel, "best," for general cultivation; Louise Bonne Jersey, and Passe Colmar, very good; Winter Nelis, good, not successful in all localities; Bloodgood and Dearborn's Seedling, recommended for further trial; Madeliene, too subject to blight; Washington, not sufficiently tested. The Isabella, the best grape for general cultivation; and Catawba "superior" where ripening. Among the peaches recommended were Crawford's Early, Early Barnard, Early York, Large White Cling, Crawford's Late, and George the Fourth—the two first for general cultivation.

Hints on Stabling Horses and Cattle.

In all the arrangements for constructing and keeping stables in order, the comfort, and consequently the health and thrift of the animal should be kept constantly in view. Some farmers, well satisfied with the importance of a pure air, think it sufficient to open a stable window or door occasionally, for this purpose. This usually throws in a strong cold current about the animal's feet, the warmer and fouler air remaining, by its less specific gravity, in the upper part of the stable, and unreached by the fresh current. A wooden tube, running up like a small chimney from the upper part, in which the current may be regulated according to the coldness or windiness of the weather, by a wooden valve, is far better. Cleanliness under foot is another very important ingredient to the comfort of animals. This can be secured only by a good stone or plank floor, very frequent cleanings, and a sufficiency, not superabundance, of clean dry litter. Remember, it is about as easy to throw out a cart load of fresh droppings, in fifty different operations, performed three times a day, as to do it once a week, at one formidable and disagreeable task. A stable, clean underfoot, is absolutely essential to a pure air.

Many horses should never be stabled in one apartment, or in adjoining stalls, under one roof. For if one becomes affected with disease, especially if a contagious one, the others in all probability will receive it. One horse getting loose, will disturb the rest; or if one becomes restless from any sudden attack, the noise deprives the others of their regular repose, and renders them also more liable to an attack. It is said that a marked difference in the amount of labor performed by a set of horses, has been observed after a night of disturbed repose from a single affected animal. Every farm should be provided with at least one "loose box" (or room for turning in loose) for any animal that may become diseased.

Sometimes the difficulty of *access to litter*, prevents a proper attention to the comfort of stables. It may happen to be stowed away in some remote corner of the barn, or still worse and more common, out of doors, covered with snow or drenched with rain, and rendered in a great measure unfit for its intended purpose. The straw of threshed grain cannot be deposited in too convenient a position. A good arrangement is to place the "straw-barn" between the grain barn and the stables, and partly over the latter.

Stables are commonly made too small. Many of the stalls made for horses are not over twelve feet in length, including manger or feeding-box. Eighteen feet would be much better. The partitions should be of strong and solid timber, and sufficiently high and tight to prevent their seeing or smelling each other,—the usual preliminary to kicking. Boxes should be ten feet square.

Cattle, that are stabled in winter, are more apt to be neglected in cleanliness, than horses. It seems revolting, that the animal from which we derive so much of the supplies for the table,—butter, cheese, milk and cream, should be compelled to lie on foul beds and breathe a foul atmosphere. Such causes must of necessity injure the quality, and lessen the quantity of these products, at the same time that the animals suffer in condition. Clean dry beds, from very frequent cleaning and attention, and a good wholesome air, would certainly contribute much to the comfort of the animal, and still more, we should think, to the comfort of the owner and attendant, if they have any appreciation of the elements of comfort and enjoyment.

Importation of Cattle.

Messrs. Morris and Becar received a very valuable addition to their herd a few weeks since, in the Short-Horned cow "*Jacintha*," purchased by Mr. Morris while in Europe last year, of Mr. J. S. Tanqueray, of Hendon, an account of whose extensive and valuable herd will be found in the Letter of our London correspondent published this week. Mr. T. has one of the best herds in England, and we have heard "Jacintha" spoken of by those who had seen her in England, as one of his best. Her pedigree and portrait are published in the last Vol. of the Herd Book, and seem to justify the encomiums she has received.

The ship Queen of England, from Liverpool, arrived at New-York Nov. 20th. There were shipped on board this vessel, a very valuable cargo of domestic animals, consisting of the Short-Horn bull "4th Duke of York," owned by Gen. Cadwallader, of Philadelphia, and Mr. Vail, of Troy, whose pedigree was published in the Country Gentleman, of Nov. 17th—the Short-Horn bull "Lord Ducie," purchased of Mr. Bell, by Dr. H. Wendell, of this city—thirteen South Down Sheep for Gen. Cadwallader—five Horses, eleven bulls, twelve heifers and heifer calves, and thirty-six sheep for parties in Kentucky. The ship experienced very bad weather, soon after leaving port; and we regret to have to add, resulted in the loss of the splendid bull "4th Duke of York," for which Messrs. C. & V., it will be remembered, paid 500 guineas—a loss not more to be regretted in a pecuniary point of view than to the stock-growers of the country. In addition to this, five of the bulls, five or six of the heifers, and about a dozen of the sheep for Kentucky, were lost on the passage. A correspondent furnishes the following account of these losses: "The weather became very boisterous almost immediately after the vessel left Liverpool; when two days out, during a heavy gale, 4th Duke, who was very heavy and in high condition, became restive and broke from his stall or box, but was secured without damage to himself or others. During the succeeding night, however, the gale continuing to rage violently, he was suddenly thrown forward, (in a cross sea,) on his head, and broke his neck, and was dead in less than two minutes. During this gale, as well as at short intervals through the voyage, one after another of the Kentuckians' animals were either suddenly killed or died from bruises and other injuries."

Dr. Wendell's bull, we are glad to learn has ar

rived at his farm, in good order, having suffered but little on the passage. His pedigree, furnished us by Dr. WENDELL, is as follows:—

LORD DUCIE, roan, calved May 5th, 1852, bred by Mr. R. Bell, (the nephew of the late Mr. Bates,) of Mosbro Hall, St. Helens, near Liverpool—got by the Duke Bull 5th Duke of York (10,168)—who was bred by Mr. Bates, and who is full brother to 4th Duke of York (10,168.) Dam, Briar, by 2d Duke of Oxford (9,046)—who is also the sire of 4th and 5th Dukes of York, and *grand sire*, on the dam's side, of Col. Morris' Duke of Gloucester, who was recently bought at Lord Ducie's sale for 650 guineas. Gr. D., Beauty, by 2d Cleveland Lad (3,408,) who is the sire of Mr. Thorne's Grand Duke (10,284,) who was recently purchased in England for 1,000 guineas. Gr. Gr. D. by 2d Earl of Darlington (1,945,) who was bred by Mr. Bates, and got by the celebrated Princess bull Belvidere (1,706) out of Young Trinket, by Symmetry)643,) who was bred by Sir Henry Vane Tempest. Gr. Gr. Gr. D. by the Duke of Cleveland (1,957,) who was bred by Mr. Bates and got by the Daisy bull Bertram (1,716) out of Duchess xxvi., by 2d Hub back (1,423,) &c., &c. From the above pedigree it will be perceived that Lord Ducie is very rich in Duchess, Princess and Oxford crosses; he is also represented to be a very fine animal and *very* much liked in England.

Mr. Chapman's Short-Horns.

MT. PLEASANT FARM,
Clockville, Madison Co., N. Y., Nov. 23, 1853.

FRIEND TUCKER—You doubtless recollect that at the time of Mr. VAIL'S sale in 1851, I purchased at private sale, "Hilpa IV.," then two and a half months old, for $300. This heifer won the first prize at the State Fair held at Rochester, as a calf, and the first at Utica, as a yearling. The 13th of April last she produced a fine roan bull calf, which I sold, July 4th, to L. W. RATHBUN, of East Springfield, Otsego Co., for $300. Mr. RATHBUN, in a letter to me, dated 21st October last, says—"Cupid won the first prize at our County Fair, and I was offered $500 for him, but I told the man I could not take it."

So far as I know, (and I believe I have heard from all but one,) I have never yet sold an animal, (short-horn,) that has failed to win a prize, wherever exhibited, whether at State or County Fairs; and I think, with only one exception, that I have myself always won a prize on every animal exhibited for this purpose.

Below I give you the pedigree of Mr. RATHBUN'S bull:

CUPID, roan, bred by S. P. CHAPMAN, calved April 13th, 1853—got by Halton* (11,552)—Dam [Hilpa iv.] by Duke of Wellington 55, (3,654)—(bred by Mr. Bates and imported by Mr. Vail)—g. d. [Hilpa,] (also imported by Mr. Vail,) by Cleveland Lad (3,407)—gr. g. d. [Hawkey] by Red Rose bull (2,493)—gr. gr. g. d. [Hart] by Rex (1,375)—gr. gr. gr. g. d. bred by Mr. Richardson, of Hart, Durham, England, from an old and celebrated milking tribe of Short-Horns. Repectfully yours, S. P. CHAPMAN.

We are using boiled carrots and meal for our fatting hogs, and think they make good food. They are probably worth more than potatoes for fattening—though actual trials are wanted to determine the question.—*Massachusetts Plowman.*

* Halton is a Lady Barrington bull, being sired by Meteor 104 (11,811.) Dam, Lady Barrington iii., &c., &c. Hilpa iv., Halton, Meteor and Lady Barrington iii., have each won first prizes at the shows of the New-York State Agricultural Society.

Small and Large Red Clover.

EDITORS CULTIVATOR—Is there more than one variety of Red Clover? That is, is there really a big kind and a small kind, as we often hear spoken of?—Seedsmen and agriculturists disagree about this, I believe. At least there is a *pretended* difference, and I wish to know whether there is a real one, and if so, by what means the seeds may be known from each other. GEO. A. DUDLEY. *Ellenville, N Y., Nov. 28th*, 1853.

There are two distinct sorts, doubtless varieties of the same species, one of which grows considerably larger than the other, and ripens its seed about a fortnight later. It is not now much cultivated, we believe, as in our climate it does not ripen its seed after cutting the first crop for hay the same season, as happens with the common or smaller sort. The large variety is too coarse for good hay, especially on rich soils, but is preferred by some cultivators for green manure on account of its heavier growth. We know of no way to distinguish the seed.

The common red clover is ordinarily a biennial, sometimes, however, continuing three years on light soils, its longer growth being sometimes perpetuated by self-seeding. There is a smaller species (*Trifolium medium*) that has a perennial root and light red or whitish flowers, that some writers have spoken highly of, and among the rest, Sir John Sinclair, who raised on a very rich piece of ground a crop which, when green, amounted to several tons to the acre (the precise amount we do not recollect,) but as it has never found its way into general use, it may not be of great value.

Hedges—Information Wanted.

MESSRS. EDITORS—In the 18th number of the present volume of the Country Gentleman, I find an extract from an article on "Osage Orange Hedges," by Prof. J. B. TURNER, of Illinois As his place of residence is not given in the extract, I will ask, through your columns, of Prof. TURNER, or some other gentleman of experience, the most approved mode of raising the plants and cultivating the hedge, giving the manner of sitting, and the treatment for the first four years, with the form of the hedge at different periods during the time. A SUBSCRIBER.

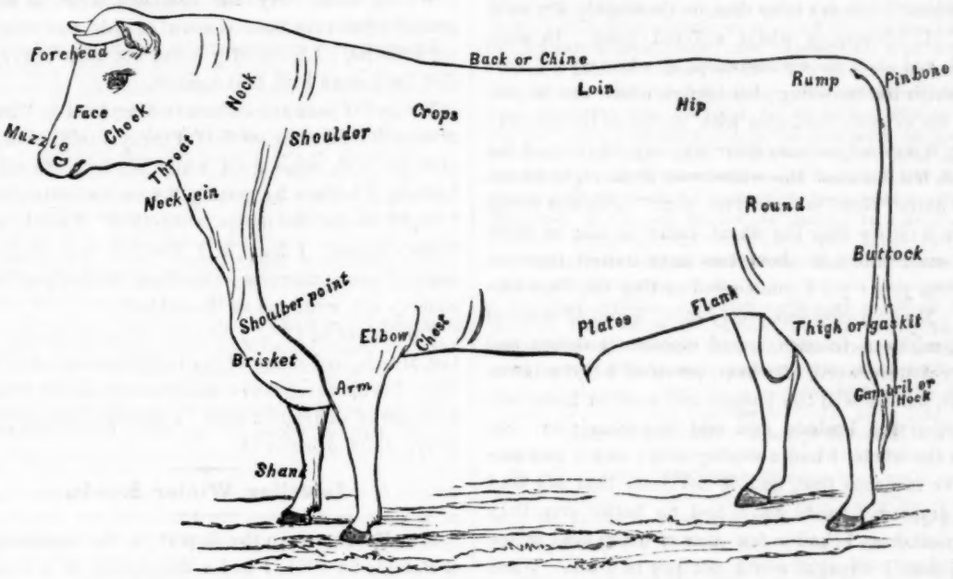
Wild Cherry for Hedges.

MR. TUCKER—I have been a constant reader of the Cultivator for a number of years, and have observed at different times, a variety of plants recommended for hedges, but have never noticed the common wild cherry recommended for that purpose. I think it one of the best kind of trees for that use, for various reasons, some of which are, that it is easily transplanted—it produces no suckers from the roots—it is very thrifty—its timber is valuable, as also its roots for medicinal purposes—it will live well when lopped, and is a very thrifty tree, frequently growing four or five feet the first year from the stump; and here let me say, for the benefit of other farmers, that the sprouts should not be allowed to grow from the stump, if the lops are expected to flourish for a hedge. E. GRIFFING. *Westhampton, Suffolk county, N. Y.*

Common Terms Denoting External Parts of Animals.

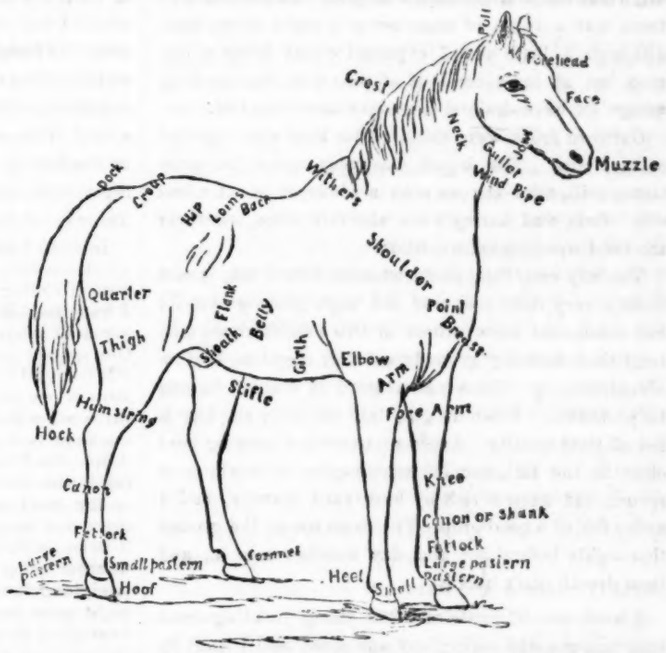
For the benefit and interest of our young readers, we give in the annexed figures an explanation of the more common English terms used in describing the external parts of horses and cattle. The names being placed upon the parts designated, the impression is vividly and distinctly made through the eye, in a better manner than by the usual mode of references.

The structure of a horse's foot, which every one who owns a horse should understand, is distinctly exhibited in the accompanying figure.



Explanation or Chart of English Terms used in Describing the External Parts of Cattle.

Section of a Horse's foot.



Explanation or Chart of common or English Terms used in describing external part of a Horse

Good Wheat Crop.—It appears from a statement in the Southern Planter, that Mr. Charles Friend, of Prince George Co., Va., harvested 3,309 bushels and 12 pounds of wheat from 135 acres, averaging but a fraction less than 29 bushels to the acre.

Mr. Z. B. Wakeman, of Herkimer county, informs us that he has hired one of the South Down Rams, imported by Mr. Morris, from Mr. Webb's flock. It is a splendid animal, and cannot fail to be of great service to Mr. W.'s fine flock.

The Crops—Practical Farming

NEAR GENEVA, 9th December, 1853.

MR. TUCKER—After a long silence, I write you about crops, &c. Our wheat crop in Seneca and the adjoining counties, was not so much hurt by the wheat midge as in 1852; still there was a serious loss by that insect, more especially on all wet or damp soils, where the wheat is always later than on thoroughly dry soils. The Mediterranean wheat suffered least. In some fields, and even some whole crops of white wheat, were not worth the threshing; but though wheat was in general not so much damaged with midge as the previous year, it was not because there was any decrease of the insect, but because the wheat was from eight to ten days earlier than the previous year. This was owing to the weather after the wheat came in ear, as mine only came into ear about two days earlier than the previous year; yet I commenced cutting ten days earlier. My own crop was pretty fair. From 45 acres of land, minus a fraction, I had eighteen hundred and thirty dollars' worth of wheat, provided I had sold the whole, but I sowed 100 bushels and kept for home consumption 103 bushels, and sold the remainder. So, upon the whole, I had a paying crop; and I had conclusive evidence that, had it not been that my land was drained, I would have had no better crop than many others. I had a few spots of damp land in one field, that I thought would not pay to drain. When we came to harvest it, we found the midge had taken it all, while the drained land was good. In another field there was a ridge of some seven or eight acres, that, although a little wet, I expected would bring a fair crop, but at least one-half of that was destroyed by midge. I have drained this eight acres this fall.

Our corn crops were much better than was expected at one time. The drouth was very severe for some time; still, take the crop as a whole, it is not a bad one. Oats and barley were also fair crops wherever the land was in good condition.

The hay crop throughout western New-York, is said to be a very short one, and the high price proves it; but mine, and some others in this neighborhood who treat their mowing grounds as they ought to, had an abundant crop. Mine was as good as it could be and be profitable. When it gets laid too early the hay is not of good quality. I never pasture my mowing land close in the fall, nor let anything on it in winter or spring, and keep it rich by barn-yard manure, and I never fail of a good crop. The grass covers the ground thoroughly before hot and dry weather sets in, and then drouth don't hurt it.

I have now 52 cattle and 260 sheep treading straw into manure, and eating hay and meal, and I shall by and by send you eastern men some first-rate beef and mutton, and have a large quantity of manure to raise more large crops; but any part of my land is as rich as is profitable for wheat. No other than Soule's wheat would stand up now; but for grass and Indian corn, I am yet to learn the extent I might go in manuring before it would have too much. This is the second time I have got my land almost too rich for wheat; but I can soon reduce it by cropping more. This year I have sown 13 acres with wheat after the oat crop was taken off, which is the second time I have ever done so; but I know the wheat would be almost certain to lodge, if fallowed.

Our potatoes have almost all rotted.

Wheat looks very fine this fall, what is on the ground; but very little is sown in this and neighboring counties. I have fifty acres, but hear of very few that have sown half that amount.

If some of your subscribers in Maryland or Virginia, or even the extreme south of Pennsylvania, would furnish me with some good white seed-wheat, say 100 bushels, I believe by getting it from an early climate, I might escape the midge altogether. I would prefer Soule's wheat. I hope, if I live till next July, that some of your numerous subscribers in that part of the country will write me on the subject.

I have put in all of 2,500 rods of under drains since last March, and many of my neighbors are also draining. I will never have many more drains to make, for want of undrained land. I remain, dear sir, yours truly, JOHN JOHNSTON.

Leveling Winter Roads.

MR. EDITOR:—In the Report of the Commissioner of Patents for 1851, I find a description of a machine for leveling roads after snow storms and drifting winds in winter, which strikes me as eminently feasible, and which I am satisfied, in many parts of the country, would be found of great utility. I enclose you the material portion of the statement, in the hope that if the remainder of the winter should happen to prove severe, a trial of its merits may be made in districts liable to be blocked up with snow. The communication in the report from which I copy, is from the pen of Mr. JOHN THOMAS, of South Barre, Vermont. He says:

In 1846 I invented and put in operation an implement consisting of three rollers, or drums, for the purpose of rolling land in summer and roads in winter.† I have used it for four years past, and it has exceeded my most sanguine expectations in regard to its utility. One span of horses (weighing twelve hundred each) will roll from 20 to 25 acres per day. In winter, when the snow is one foot deep, four such horses will roll a road three miles per hour, leaving the track 12 feet wide, the snow being hard and smooth, and but three inches deep On Monday, the 23d December, 1850, the snow fell in the vicinity where I live two feet deep, drifting on the road to the school-house one foot, making it three feet deep. On Tuesday we drew the roller over it twice, with three yoke of oxen and one horse, the weather being cold. On Wednesday I trotted my horse (weighing fourteen hundred) over this road, at the rate eight miles per hour, drawing a sleigh and six persons, averaging in weight 120 pounds each, passing sleighs

† The general nature of the implement, the details of which do not clearly appear from Mr. Thomson's drawing and description, is as follows: Two of the three rollers are placed in a line, on the same axle, four feet apart. The third one is placed some distance behind, and rolls over the space left between the two front ones. The front rollers are four feet long, each, and the rear one five feet. They are all four feet in diameter, and are made in the form of drums; the heads of two inch, and the staves of one and a half inch plank. The machine is loaded as occasion requires.

in perfect safety without breaking the trot, the horse's hoof not indenting the snow more than two inches, and the sleigh not cutting in more than half an inch. I have, in years past, commenced rolling when the first snows falls, repeating the rolling every snow storm, until, in some drifting places, the hard snow has accumulated to the depth of six feet, and have seen loaded teams pass each other as fearlessly and safely as an eagle will sail over our hills.

Another advantage is, that a wheel carriage is enabled, by the use of this roller, to run with ease and safety, enabling teams to cross over hills and vales in the spring, when the snow is melting and the ground is bare in spots. Again when the snow is going off, it melts gradually, and does not gully the road, as it otherwise would.. In 1848, one foot of snow fell in December.—I rolled the road from my house to the village, (it being two miles.) Soon after the wind arose and blew the snow out of the road in spots, drifting it in other portions on all the roads in this vicinity. No more snow fell that winter. There was no good sleighing or wagoning on the roads that were not rolled all winter; but on the rolled roads we had both.

The cost of a triple roller here is $15 and I presume there are but few schools or highway districts in Vermont, or in any of the neighboring States where snow abounds, which have not team enough to draw a roller. And it would be one of the greatest favors the State Legislature could confer on the people to pass an act requiring them to furnish themselves with rollers, and roll the roads of their respective districts every time the snow falls four inches. The same roller will be sufficient to roll the land for a whole district by putting on a body and a pair of thills to each roller—thus giving you three one-horse rollers.

There are many districts in this state, where this "Roller," once adopted, would be found indispensable. The elevated parts in the southern towns of this (Onondaga) county, are some times shut out for days and weeks from all convenient intercourse with each other, or with their neighbors, and yet with this implement I am convinced they might always have good roads. Commissioners of Highways, I imagine, already possess the requisite authority for providing themselves with Mr. Thomas' implement. I hope a trial will be at once made of it, and the results communicated to the public. S. *Syracuse, Dec.* 1853.

The Potato Disease in Great Britain.

The Farmer's Magazine (London) thus alludes to the Potato Disease of 1853 :—

When shall we have done with the alarms, the theories, the specifics, and with the reality of the potato disease? That it seems to be now, nearly beyond all precedent, serious ; that it has assumed even new phases of virulence; and that it has utterly, hitherto, baffled all possible efforts of man—appears to be acknowledged. Science and skill, practice and experiment, seem all set at one fatal defiance. The Potato Commission met, and investigated, and reported ; and were as powerless before it as they are before war, famine, and pestilence. Nor does the tendency to disease apparently wear out. If it lies a little more quiescent one year, it is only to break out with renewed vigour the next : if one species of potato is free one season, it is the more severely diseased in the following : nay, it seems as if some vast providential arrangement were at work, specially to baffle the wisdom of man, and to say to his science, his philosophy, and his skill, "Hitherto shalt thou come, and no further!"

The phase of the potato disease of 1853 is peculiar. There are two remarkable characteristics which never before attended it. In all former years, the potatoes raised under glass gave early indications of the disease : on this occasion, there were few, if any, complaints on the subject. The next peculiarity was that, as soon as the stalks became brown and spotted, the disease was ravaging the tubers. But, on this occasion, the stalks were brown, in many cases, for weeks before any manifestation of the disease took place ; and it was hoped it had expended its virus in blackening the tops, when the tubers so long escaped. A third peculiarity was, that the crop this year was fully mature before the visitation took place ; and hence there was a prospect of a most abundant yield ; the disease set in after the heavy rains of September—a time when, otherwise, the plant was assumed to be safe. *But it was not the rain which caused it*, because in many instances, when the potatoes were taken up, and stored away carefully and dry, covered so as to have no evil atmospheric influence—still, on openiug the pits or removing thecover, if housed, they were just as bad as if they had been fully exposed. All precedent, all experience, all accumulations of knowledge, all things set at naught, with one fell swoop.

Nor is it peculiar. In the north and south of England, in the whole of Ireland, and in the generally more favored district Scotland, the disease seems to have spread, while in Canada it has appeared with great virulence. We have not heard how the small islands of Scilly and the Isle of Wight have this year been favored, as they have usually escaped in a considerable degree, when others have been sufferers.

In this country the disease has resolved itself into a simple question of the abstraction of so much food—fully thirty per cent of a good crop are already gone ; but in Ireland the investigation is more vital and stirring. We have before us a report of the meeting of the Chemico-Agricultural Society of Ulster, in which the plan of Dr. Bollman was completely canvassed, with other modes proposed to arrest, if not to cure, the disease.

Dr. Bollman's principle seemed to us by far the most reasonable of all recommended, if the disease were at all inherent from the the parent tuber. Dr. Hodges demonstrated the disease to be a fungus, breaking up the structure of the potato ; and if there was seminal infection, like the smut in wheat, Dr. B.'s plan of high-drying the tubers was by far the most rational one we knew of, especially as extreme dryness is absolutely destructive to the sporules of almost every fungus, and the Botrytes, the peculiar fungus of the potato disease, was unlikely to find a nidus in so highly-dried a set. But if it be first of all atmospheric, as is all but certain, and if the decomposing mischief is *from without*, we cannot see how Dr. Bollman's preparation could be at all effectual.

And so it appears it has failed in numberless instances ; and so has peat charcoal, as well as pulling up the stalks, planting in spent tan, and a thousand more similar schemes of prevention.

The whole of the facts, however, lead to this conclusion—plant as early as possible, so as to get a large portion matured and sold before the disease sets in, as it usually does with great severity late in August, though this year it was about the middle of September before it became general.

The Progress of Reaping Machines.—It is remarkable what an impetus has been given to the manufacture of reapers in England, since Hussey and McCormick exhibited their machines at the London Crystal Palace. Upwards of *thirty patents* were taken out there during the first half of the present year, and among the patentees were to be found men of every degree, from Whitworth, of Manchester, the first machine maker of the day, to country wheelwrights and blacksmiths, who were tempted by the cheapness of patents under the new law, to protect their crude ideas.

First Year of the Country Gentleman.

THE COUNTRY GENTLEMAN has nearly completed its first year, and a few words with regard to its prosperity are proper at this time. From the commencement, no extraordinary efforts have been made to obtain a large circulation for it, and we have abstained from the excessive parade of its merits and its claims upon the support of thinking, progressive farmers. It has been our purpose to make it a superior Agricultural and Horticultural Journal, and at the same time to combine in it matters of taste, rural improvement, pleasant and instructive miscellaneous reading, and an abstract of the current news. By using small and clear type, we have been able to furnish a greater amount of both Agricultural and Horticultural matter than any other journal of a similar character, while we have had ample space for miscellany and news. We have endeavored to supply the Farmer and Gardener, and their families, with a paper strictly adapted to their wants, and one which should merit their respect and good will. That we have not failed in securing the confidence and approval of our patrons and the public generally, the many complimentary letters we have received, and the extent with which the articles in the Country Gentleman have been copied, both by the agricultural and secular press, are a satisfying evidence. Our circulation—thanks to our friends, who have generously recommended us to patronage—has been steadily increasing, and we shall enter upon a New Year with bright prospects and a full confidence in a greatly increased list of subscribers for our second year. But we base our expectations upon the continued aid and cooperation of those who are seeking with us the spread of agricultural knowledge, and of a pure and elevated fireside literature. It is only through the efforts of those who already know the importance and value of sound and practical instruction, that we can hope to reach the thousands who are insensible to the benefits growing out of reading, and who must be reasoned with and urged to avail themselves of the experience and wisdom of others who have worked their way into a more rational and profitable method of farming. While we shall continue with renewed energy our exertions to furnish a paper whose contents shall always be valuable to the farmer, and all who have any interest in rural pursuits, we earnestly solicit our present subscribers to lend us their best efforts to extend the circulation of the COUNTRY GENTLEMAN.

We avail ourselves of this opportunity to return our sincere thanks to all who have contributed to our columns during the past year. We wish to have this journal the medium of inter-communication between thorough and accurate farmers, and to this end we solicit correspondence from those who have made careful experiments in any branch of farm pursuits, as well as inquiries with reference to the detail of farm practice. Let no one be deterred from committing his experience to writing because he is not practiced with the pen. Give us thoughts and suggestions in the rough—they are no less valuable or important because they may lack the graces of elegant diction. If farmers would have their paper promote their interests, they must write for it, and we should be glad to welcom a score of new contributors, among the hundreds of new subscribers who enroll themselves on our list as friends of agricultural improvement.

Again we present our hearty acknowledgments to all who have favored us with their patronage, or in any way contributed to the success which has crowned the advent of the COUNTRY GENTLEMAN.

THE COUNTRY GENTLEMAN:

A WEEKLY JOURNAL

For the Farm, the Garden, and the Fireside.

THIS beautiful and excellent weekly paper has now been published nearly a year, and the gratification with which it has been received by the public, and the liberal circulation already extended to it, show that its general plan and object has met with the hearty approbation of those whose interests and improvement it was intended to promote. It combines in one large sheet, an AGRICULTURAL, HORTICULTURAL and FAMILY JOURNAL, furnishing, beside its large amount of practical matter on Rural Affairs, in its FIRESIDE DEPARTMENT, a choice collection of articles peculiarly adapted to interest and exalt the views and aims of the FAMILY CIRCLE, together with a careful digest of the NEWS OF THE WEEK, and a full report of the PRODUCE and CATTLE MARKETS.

It is illustrated with superior engravings, and printed in a neat and attractive style, making two handsome quarto volumes of 416 pages yearly. Price, Two DOLLARS per annum, in advance.

A new volume commences with the year 1854, for which subscriptions are solicited.

Specimens of THE CULTIVATOR and THE COUNTRY GENTLEMAN will be sent to all who desire them, and POSTMASTERS and others interested in rural pursuits, are invited to act as agents. All letters to be addressed to

LUTHER TUCKER,
Publisher of Cult. and Co. Gent.

The Cultivator for 1854.

THIS well known Standard Agricultural Journal commences a new volume (the 2d of the Third Series) with the January number for 1854, at FIFTY CENTS a year, making it the cheapest as well as the best work of the kind now published. To Clubs of eight or more, it is furnished at 37½ cents per copy.

☞ All new subscribers can be furnished with the first Vol. of the Third Series, for 1853—stitched in printed covers at 50 cents.

☞ Editors with whom we exchange, will confer a favor, by copying the above.

☞ We want Agents for the COUNTRY GENTLEMAN and THE CULTIVATOR in every town throughout the country. Post-masters and others disposed to act as local agents, will be supplied with terms, samples, &c., on application.

"The Working Farmer."

The editor of this paper—a self-styled "consulting Agricultural Chemist"—devotes four and a half pages of his December number to a review, professedly, of the articles which have appeared in this paper on the subject of the analysis of his super-phosphate of lime, by our correspondent, Mr. S. W. JOHNSON, and shows, we regret to have to say, that his capacity for stating a case truthfully is no higher than that of his ability to impart instruction in chemistry. His whole course in relation to this matter, can be accounted for only on the ground that he desires to excite the sympathy of the public by representing himself as a greatly abused and persecuted man; for there is not the least foundation for the insinuation that Mr. JOHNSON's analysis was either made or published with a view to injure him, nor did it have any such effect. Mr. JOHNSON made the analyses of Mapes' and De Burg's superphosphates of lime with no other view than the public good; and we venture the assertion that not one of our readers ever for a moment considered Mr. Johnson's article as an "attack" upon Mapes; but from some peculiar idiosincrasy of mind, Mr. MAPES chose to represent it as an attempt to injure him; and has continued for months totally to misrepresent the course of Mr. Johnson and ourselves in this matter.

We have no wish to prolong this controversy with a man who endeavors to sustain himself in a false position before the public, farther than is necessary to place the matter at issue in its true light. In the article alluded to, Mr. Mapes says—"That our position may be fairly understood, we beg to recount the history of this dispute." In this history, we are charged,

1. With having republished Mr. Johnson's analysis, "with deductions not warranted by the analysis itself, and calling its author Professor in Yale College."

2. With "parading the sulphate of lime represented in his analysis, accompanied by innuendoes that it arose from the addition of Plaster of Paris, added to the material with the view of wronging the purchaser."

3. With "publishing the analysis with such misrepresentations and such comments as were calculated to deceive our readers as to the quality of the improved super-phosphate."

4. With having published an analysis by Dr. Antisell, with which Mr. Mapes was satisfied, "and afterwards quoting an earlier and erroneous one, and coupling with it the name of *Professor* Johnson."

5. With having charged Mr. Mapes "with sending specimens made up for analysis."

6. With continuing to offer the "first analysis of Dr. Antisell and the analysis of Mr. Johnson to disprove the analyses of Dr. Enderlin and others."

Now we hardly know with what words, without overstepping the bounds of courtesy, to brand *all* these statements. *There is not, in either of them, one word of truth.* They are not misrepresentations merely.—There is no foundation, either in fact, or by implication from anything we have said, for any one of these charges. We have never "republished" Mr. Johnson's analysis—never made any "deductions" from it—never called Mr. Johnson "Professor in Yale College"—never "paraded the sulphate of lime"—never intimated that Mr. Mapes added "Plaster of Paris for the purpose of wronging the purchaser"—never published the analysis accompanied by "such misrepresentations or comments as were calculated to deceive," nor with any comments at all—never published any analysis by Dr. Antisell—never referred at all to either his correct or his erroneous analysis, and of course never connected the name of "*Professor* Johnson" with it; nor did we ever charge Mr. Mapes with sending "specimens, made up for the purpose, for analysis."

Thus from a single column of Mr. Mapes' article, we have shown him guilty of making about a dozen misstatements. What motive could have induced him to pursue such a course, it is no part of our business to inquire; but if his assertions about a simple matter-of-fact about which there can be no question, are thus inexcusably incorrect, we leave it for our readers to judge as to what credit should be given to his scientific deductions and his marvelous statements with regard to crops raised, and the benefit derived from his prescriptions as a "consulting agricultural chemist."

We do not deem it necessary to enter into a defence of Prof. PORTER against such an assailant. If he deems any notice of the remarks of either Mr. Mapes or Dr. Enderlin, necessary, he is abundantly able to defend himself; but for ourselves we wish to say that in the discharge of our editorial duties, we consider the exposition of error as well as the elucidation of truth, incumbent upon us; and that, while we have found it necessary occasionally to expose the fallacious teachings and remarkable statements of Mr. Mapes, we have been guided by no unkind feelings towards himself or his paper.

Grass for Reclaimed Swamps.

I am very much pleased with the plan of asking questions, and receiving answers, through your valuable monthly; and being in want of information, I take that means to obtain it.

I have a piece of reclaimed swamp which I wish to seed with grass the coming spring, and am desirous of knowing whether I had better use Red top, Timothy or Fowlmeadow grass seed, and where I may obtain Fowlmeadow seed, and at what price per bushel. I would like to inqnire also if Kentucky blue grass would be preferable to herdsgrass on lands that are permitted to remain five or six years at a time in pasture, and then plowed two years, and then laid down again to pasture. If any of your readers will answer these inquiries they will greatly oblige A SUBSCRIBER.

For *well drained* bogs, we have found nothing equal to timothy, sowed thickly so as not to make too rank a growth. Red-top is decidedly inferior to it. Both mixed would yield heavier than either alone. We can give no certain information relative to fowlmeadow and Kentucky blue grass for such soils, and request such of our correspondents as possess information on this subject to communicate it.

A SNUG WHEAT FIELD.—A. S. UPHAM, of Le Roy, N. Y., is reported to have raised from a field of one hundred acres, the snug little quantity of 3,600 bushels of wheat the present season, being about 36 bushels per acre.

Notes for the Month.

To our Agents and Friends.

In presenting to you the first number of the 2d volume of the third series of THE CULTIVATOR, we do not hesitate,—believing as we do that the reader will be more benefited than the publisher, to appeal to each and all of our readers, to aid us in the good work in which we are engaged, by renewing and increasing their efforts to extend the circulation of THE CULTIVATOR for 1854.

☞ All those disposed to act as Agents for The Cultivator, will please to remember,

1. That all subscriptions for eight copies or more, are to be paid for at the rate of 37½ cents each, and that the money, with postage stamps for any fractional parts of a dollar, should accompany the order.

2. After an Agent has ordered eight copies, he can order any less number at any time at the club price.

3. The papers will be addressed, when requested, to the individual subscribers, and to as many different post-offices as may be desired.

4. Great care should be taken to write the names and address of each subscriber, distinctly, thus:

John Smith, Washington, Berkshire Co., Mass.

☞ Specimen Numbers and Prospectuses will be sent to all who desire them.

☞ All Agents for THE CULTIVATOR are authorized to act as Agents for THE COUNTRY GENTLEMAN, and to retain a commission, where four or more copies are ordered, of fifty cents on each.

Back Volumes of the Cultivator.

I. The FIRST SERIES consists of TEN volumes, quarto, of which a few copies are yet for sale—price, bound, $10.

II. The SECOND SERIES contains NINE volumes, octavo—price, bound, $11.25.

III. The THIRD SERIES commenced Jan'ry. 1853—consequently the first volume is now completed. Price, bound, 75 cents—put up in paper covers, 50 cents.

☞ Most of the volumes of all the series, can be furnished to complete sets.

☞ All new subscribers for 1854, would do well to order the volume for 1853, that they may have the third series from its commencement.

Address LUTHER TUCKER, *Albany, N. Y.*

MIXING GRASS SEEDS.—European farmers have long since found an advantage in mixing several kinds of grass seed together for seeding down, as they feed more or less differently from the soil, and at different depths, and yield more growth of herbage than one sort of grass alone. We think the practice has not been sufficiently adopted in this country. A late writer says he has adopted the following with beneficial results:—Ten pounds of red clover, five pounds of white clover, one peck of herd's grass (timothy), and half a bushel of red-top, followed by two bushels of plaster.

THE MICHIGAN DOUBLE PLOW.—We perceive that the *New England Farmer*, in consequence of too brief an explanation on our part, has entirely misunderstood our remarks in relation to the team required for this plow. Our experience in this matter gives precisely the same results as those found by the New England Farmer, with the exception, perhaps, that we think decidedly less draught required than for a common plow *cutting the same width and depth.*

A Michigan plow of a size corresponding with that of a common plow, will cut a furrow one-half deeper, or as three is to two, and consequently must run harder than the latter. For plowing nine or ten inches deep, two yoke of oxen or two pair of common horses are usually required; for one foot in depth, the largest size Michigan plow is needed, and must be drawn by three yoke of oxen.

For a given depth, we are satisfied the Michigan plow requires the least draught, in consequence of the inverted slice being composed of two distinct portions, which are more easily turned and thrown where they are to lie, than one thick, stiff, and unmanageable sod. At the same time the work is done in a far better manner, especially when the plowing is quite deep. It would, indeed, be next to impossible to plow a foot deep, and quite so to do the work well, with a single mouldboard.

Mr. JOSEPH HARRIS, who has been for the last year or two one of the editors of the Genesee Farmer, at Rochester, has become associated with Mr. MOORE, in the Rural New-Yorker Mr. H. has much experience as a practical farmer, and has had opportunities which few men in this country have enjoyed, of studying the science of agriculture. His labors will add much to the interest and usefulness of the paper with which he has now connected himself.

POULTRY EXHIBITION AT ALBANY.—The Utica Herald, in answer to a paragraph, as to the time when this exhibition will take place, says:—"We suppose we started the announcement of a Poultry Show, to be held at Albany on the 10th, 11th and 12th of January next; and we did it by authority of the officers of the State Poultry Association. They have since, however, changed the time to correspond with that of the Winter Exhibition of the State Agricultural Society. The Grand Poultry Show will accordingly take place at Albany, on Tuesday, Wednesday and Thursday, February 7th, 8th and 9th. This change of time has been deemed advisable, to accommodate those who shall wish to attend both the Agricultural and Poultry Exhibitions." This announcement, the Herald says, may be deemed authoritative and reliable.

A LARGE FARM.—We see it stated in the Ohio papers, that M. L. SULLIVANT, who we believe now owns the largest and most valuable farm in Ohio, has lately purchased *sixty thousand* acres of land in Lawrence county, Illinois, which he intends to convert into a stock farm, his men being already at work on the fencing and in making other improvements.

RETURN OF PROF. NASH.—Our foreign correspondent, Prof. J. A. NASH, of Amherst College, has just returned from his foreign tour, having spent the past summer and autumn in a careful and thorough investigation of the systems and practice of agriculture as pursued by the best farmers of Great Britain. He also spent a brief period in France and Belgium; and he returns, with a better knowledge, probably, of the principles and practice which has given British agriculture so high a rank, than any American who has visited Europe. Our readers will have seen, from the letters we have already published, the view which he takes of the subject, and they will be glad to learn that he is to continue his series of Letters for the COUNTRY GENTLEMAN for some months to come, from the notes which he made while abroad.

MR. THOMAS GOULD, of Aurora, Cayuga co., has recently added to his fine herd of cattle, a very fine Devon bull, called "Holcomb," purchased of LEWIS G. MORRIS, Esq., Fordham. The dam of Holcomb was imported from the Earl of Leicester, and his sire was the celebrated bull "Major," formerly owned by R. H. VAN RENSSELAER, of Otsego county.

MR. A. J. MOSES, of Champlain, Clinton co., returned home last week with a very superior Short-Horned bull calf, named "Oxford Lad," which took the first prize at the American Institute, purchased of Mr. Morris. He was sired by Lamartine—dam, imported "Oxford 5th."

WESTERN HORT. REVIEW.—This work, which was suspended a few months since, is to be resuscitated, under highly favorable circumstances. The first number of the new series will be issued on the first of January. Dr. J. A. WARDER, Editor; J. W. WARD, ass'tnt editor; and H. W. DERBY, publisher, Cincinnati. $3 per year.

ALDERNEY COWS.—Mr. J. A. TAINTOR, of Hartford, Conn., has recently received two Alderney Cows from the Isle of Jersey. They are said to be very fine, one of them being a first prize cow, the past year, and the other, the previous year.

TO PREVENT "WINTER-KILL" IN ANIMALS.—Some of the papers give the following remedy, written "doctor-fashion":—

R.—Refug. opt. q. s.; Zea pulv. q. s.; Aq Fort. q. s.

The Zea to be applied as a poultice to the mucous membrane of the stomach. It will be needless to inform those skilled in learned prescriptions that this simply means good shelter, corn meal and pure water, and is very sound practice, although the crows denounce it as rank quackery, and a gross infringement on their rights and privileges.

CHLOROFORMING BEES.—Some weeks ago, a correspondent of the New-Yorker objected to this mode of stupefying bees while removing the honey, stating that in an experiment of his the bees all went to sleep, but never awoke! Another correspondent thinks he used too much, adding that he succeeded admirably, by placing the hive for 25 minutes, on a cool autumn morning, over the chloroform, when the honey was cut out, the hive replaced, and by 12 o'clock all were lively as ever.

CORRECTION.—The *Massachusetts Plowman*, in an article on the recent importations of cattle, speaks of one of Col. MORRIS' purchases in England, as having been made "for the New-York State Society." This is a mistake. Our State Ag. Society has never had occasion to import any domestic animals, all wants in this respect having been supplied by the public spirit of individual citizens.

STEUBEN COUNTY.—An Agricultural Society was formed in this county in June last, which held its first fair at Bath on the 13th and 14th of October, and the exhibition, both in quality and extent, exceeded the most sanguine expectations of its friends. We have been favored with a copy of the excellent address delivered on the occasion by the President, Hon. G. DENNISTON, from which we hope to be able to make some extracts hereafter.

YALE COLLEGE.—We invite attention to the advertisement in this paper, in relation to the course of Lectures on Agricultural Chemistry in Yale College, by Prof. PORTER, the successor of the late Prof. Norton. Prof. P. was for several years a pupil of Liebig, and has shown himself a competent and popular lecturer on Agricultural Chemistry.

FISH PONDS.—On the farm of the late GIDEON LEE, near Geneva, N. Y., is a fish-pond of about two or three acres, nine feet deep, made by running an embankment across a small valley, and covering a marsh. Trees line it, water-grasses grow in it, and cattle are not allowed to disturb it. Some seven years ago, a dozen or two of trout were placed in it, since which time at least two thousand large and fine fish have been taken from it for the use of the family. A running stream prevents stagnancy.

MANURE *vs.* GRAIN-SELLING.—Every good farmer knows that the more grain he uses to fatten stock, and the less he sells, the better for his land. The following figures show an improvement in this respect:—In 1851, over 6 millions of bushels of corn, and 10 millions pounds of bacon arrived at tide water from the west; in 1853, only about 2 millions of corn, and 19 millions of bacon.

IMPORTED STOCK.—The North British Agriculturist, in speaking of the fact that some of the finest animals were bought by Americans at the late English sales of improved cattle, says that the English bidders "succumbed before their trans-atlantic competitors," and did not bid nearly so high as the latter intended to have gone, adding, "It is not impossible that John Bull may one day require to cross the Atlantic, for some of the blood he is now allowing to leave England."

YELLOW BUTTER IN WINTER.—We observe different expedients for this purpose, and among the rest, putting in the yolks of eggs just before the coagulation of the

butter in churning. This may be good; but the best way we have found is, to put a peck of carrots—not into the churn, but—into the cow's stomach every morning and evening.

J. D. I., *Ilion, N. Y.*—"Breck's Book of Flowers," is probably as good a book on the subject as you can procure. Price, 75 cents.

C. T., *Uniontown, Pa.*—We know of no such mill as you inquire for.

GOOD AND BAD WORK.—A farmer, says Cole, dismissed a hand because, in his absence, he set only nine trees in a day. The farmer set out the remaining 91 of the hundred himself the next day. The result was, that the nine bore more fruit the first year of bearing than all the others.

SOFT-SOAPING RABBITS.—We are informed that the application of soft-soap to the trunks of fruit trees late in autumn, or in early winter, will effectually protect them from the attacks of rabbits. It is applied with a "swab."

EPITOME OF FARMING.—Make plenty of manure; put it on plentifully, and then keep the ground clean—crop by rotation—underdrain when necessary, and plow deep where admissable—keep the best animals, sell or kill the worst, and keep all comfortable, well and regularly fed, and you will farm well and profitably.

INDEX TO GOOD FARMING.—An English agriculturist quotes the old proverb, "Wherever the foot of the sheep touches, the land is turned to gold," and adds, "Show me a man's turnep field, and I'll tell you what sort of a farmer he is." We may modify this for America, and say, "Show me a man's manure heap and corn field, and I'll tell you his character as a farmer."

THRESHING IN WINTER.—A correspondent of the Michigan Farmer says that he bought, one year and a half ago, one of Emery's best Railway Powers and Threshers, for $165, and that it has already nearly paid for itself, in the following way. He set the machine on one corner of his large barn floor, and let it stand there during the winter. Every morning, before his boys went to school, they put the ponies on the machine, and in a few minutes threshed out 100 to 150 sheaves. This method gives the fresh straw daily ts his cattle, and by spring his grain is all threshed, when the machine is carefully put away.

SOUTH DOWNS FOR MUTTON.—The Wool Grower knows a gentleman in England, who annually pays $264 for the use of a South-Down buck for three months, and this simply to raise sheep for the butcher. He keeps 400 breeding ewes, selecting 60 to 80 of the best for his hired buck, and thus greatly improves the whole flock.

☞ "Muscatine," an ox six years old, raised at Muscatine, Iowa, now *en route* for the World's Fair, is believed to be the largest ox in the United States. He is 6 feet 8 inches high, 17 feet and 4 inches long, girts 10 feet 9 inches, and if fatted, it is believed, would weigh over 4,000 pounds.

Borers and Grubs.

A correspondent of extensive experience makes the following remark:—"I have long known that *urine* protects apple, quince, and peach trees, against the worms that attack them near the ground; and some recent observations have induced the belief that a shovelful of fresh manure from the stable or hog-pen is equally efficacious. It both protects them, and nourishes."

HOW TO TREAT TREES RECEIVED WHEN THE GROUND IS FROZEN, OR DURING FREEZING WEATHER.—We occasionally hear of people being quite at a loss to know what to do with trees received in a cold time, or when the ground is frozen. The way is, either deposit the packages in a cellar as they are received, or open them and set the roots in earth until the weather changes: or a trench may be made in the open ground, even if the surface must be broken with a pick-axe, and the trees laid in until they can be planted. They may remain in this state quite safe all winter. Every season we receive packages of trees from Europe in mid winter, and we find no difficulty in taking care of them in this way.—*Horticulturist.*

THE WAY TO SPOIL POTATOES.—It is a little singular that many who are otherwise excellent cooks are ignorant of the rich, dry, mealy vegetables; theirs are invariably "soggy" and heavy as bread when the yeast is worthless. Their method of spoiling potatoes after they are well cooked is wonderfully simple. They place over the dish containing them, hot and smoking from the boiler, a *tight cover*, and keep it there—any one can do it, and eat water-logged potatoes in consequence. Better put their cover out of sight, even if the contents of the dish should cool a few minutes sooner on that account. Boiled potatoes intended for the table should not be covered a moment.—*Norwich Examiner.*

A SECRET FOR A FARMER'S WIFE.—While the milking of your cows is going on, let your pans be placed in a kettle of boiling water. Turn the milk into one of the pans taken from the kettle, and cover the same with another of the hot pans, and proceed in the same manner with the whole mess of milk, and you will find that you have double the quantity of sweet and delicious butter. Try this, dairy women, and write us the results will you?—*Extract.*

INDIAN MEAL WAFFLES.—Boil two cups o .ominy very soft, add an equal quantity of sifted Indian meal, a tablespoonful of salt, half a teacup of butter, and three eggs, with milk sufficient to make a thin batter. Beat all well together, and bake in waffle irons. When eggs cannot be procured, yeast is a good substitute—put a spoonful in the batter, and let it stand an hour to rise.

TO ROAST DUCKS.—Pick, draw and singe them. Cut off the head; dip the feet in boiling water to remove the yellow skin; truss them plump, turning the feet flat upon the back. Stuff the same as goose, and serve with gravy and apple-sauce. An hour will roast a duck.

FROSTS.—The present season has been signalized by the occurrence of frosts in each month so far since the year began, with the possible exception of June. The one in July was not sufficiently intense to do any harm, but those which occurred about the 25th of August were so severe as to do a great amount of damage. In a late trip inland, we saw pieces of corn as thoroughly dried to appearance as in December. Other pieces seemed to suffer only partially, while the greater portion had escaped with little or no damage. Many fields of buckwheat also are entirely destroyed; while melon vines give unmistakeable signs of the blighting traces of the fingers of premature autumn.—*Prairie Farmer.*

Agricultural Chemistry—Yale College.

THE course of THIRTY LECTURES will commence January 9th, 1854, and continue two months and a half. Fee, $10. A special course in Analysis, with which the student may fully occupy his time, will accompany the lectures.

Address J. A. PORTER, Professor of Agricultural Chemistry, New-Haven, Conn.

N. B. Analyses of Ores, Soils, Mineral Waters, &c., made, and instruction given in general analysis.

Nov. 24, 1853.—w7tm2t

Albany Medical College.

The next Course of Lectures will commence on Tuesday the 21st of February next.

TWO Courses are delivered annually at this institution; one commencing on the first Tuesday in September, and the other on the third Tuesday in February, containing each sixteen weeks. Degrees are conferred at the close of each term.

ALDEN MARCH, M. D., Professor of Surgery.
JAMES McNAUGHTON, M. D, Prof. of the Theory and Practice of Medicine.
T. ROMEYN BECK, M. D., Prof. of Materia Medica.
JAMES H. ARMSBY, M. D., Prof of Anatomy.
THOMAS HUN, M. D, Prof. of the Institutes of Medicine.
AMOS DEAN, Esq., Prof. of Medical Jurisprudence.
HOWARD TOWNSEND, M. D., Prof. of Obstetrics.
EZRA S. CARR, M. D, Prof. of Chemistry and Pharmacy.

Fees for the first Course, $60; for the second, $50; for both Courses, if paid at the commencement of the first, $100. Matriculation fee, $5; Graduation fee, $20. The Clinical Lectures at the Hospital, are free of charge. There will be Cliniques every Saturday, as usual, in the College. Expenses for boarding from $2 to $3 per week.

Nov. 10.—w8tm3t THOMAS HUN, Register.

United States Agricultural Warehouse and Seedstore

No. 197 Water street, near Fulton street, New-York.

MERCHANTS, Planters and Farmers, in want of AGRICULTURAL and HORTICULTURAL IMPLEMENTS or SEEDS, for shipping, plantation, farm or garden purposes, will please call and examine our extensive and superior assortment of goods in the above line, unsurpassed by any other house in the United States, for finish, material and workmanship, and of the most approved patterns; all of which we will sell on as good terms as any other house in this city.

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State Agricultural Warehouse, No. 25 Cliff-street, New-York
Oct. 20th—w&mtf.

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I OFFER for sale two Short-Horn BULL CALVES, in color, red, with white faces, flanks and feet, the get of Old Splendor. Also, one BULL CALF, red and white, the get of Vane Tempest. Prices, $150 to $300.

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Sennett, Cayuga Co., N. Y., Nov. 22.—w2tm2t*

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Utica, Nov. 1, 1853.—m3t

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September 1—m6t.

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Walpole, N. H., Oct. 15, 1853—43w4t.

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HEIFERS, and Bull Calves—pure blood—for sale by
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Aug 11—w1am4m.

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Bertholf's patent, a large and powerful machine for horse-power.

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Dec. 22, 1853—w3t*

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